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T H E H A G I O P O L I T E S  
A Byzantine Treatise on Musical Theory  
Preliminary edition by Jørgen Raasted

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## INTRODUCTION

Damaged by water and worms, defective at the end, and marred by innumerable copyist's errors, folios 216-237 of the factitious Paris manuscript *Ancien fonds grec 360* have attracted the interest of musicologists and lexicographers at least since 1688, when Ducange published his "*Glossarium ad Scriptores Mediae & Infimae Graecitatis*" and quoted a number of passages from the manuscript. Since then, this mutilated collection of texts and fragments, all of them dealing with Greek or Byzantine musical theory, has been normally referred to as the *Hagiopolites* - a title which is found at the beginning of the collection and is explained in its first paragraph. For the time being I shall continue to use "*Hagiopolites*" in the traditional way, i.e. as a global reference to all the texts actually found on these twenty-two folios of the Paris manuscript ("P"). I should like to point out, however, that I still have my doubts about the correctness of the way in which the title has been understood. I express my basic ideas on this point in Note 3 to § 1, but at present I do not want to be more specific.

The *Hagiopolites* has been used by Vincent in 1847, by Tzetztes in 1874, Thibaut 1913, Høeg 1924, Floros 1970 - just to mention a few names - and there exist at least three complete copies taken from P: one by François Louis Perne in 1811 (Brussels, Bibliothèque Royale, Inv. No. II, 4159), another by Theodoros Sypsomo in 1856 (Leningrad, *Petropolitanus graecus* 140, Muralt), and a copy made by Carsten Høeg ab. 1920 (two note-books, belonging to the *Monumenta Musicae Byzantinae*). Vincent's "*Notice sur divers manuscrits grecs relatifs à la musique*"<sup>1</sup> contains on pp.259-81 text and translation of §§ 90-97 and 100-05; Thibaut's "*Monuments de la Notation Ekphonétique et Hagiopolite de l'Eglise Grecque*", Saint-Petersbourg 1913, on pp.57-60 gives the Greek text of §§ 1-27 according to the Paris manuscript, and §§ 1-5 after Sypsomo's copy as well. But no complete edition of the *Hagiopolites* has ever been made.

The physical state of P is rather bad. Until the book was repaired in the 1960s, its paper was constantly decaying, and whenever a scholar worked his way through the 22 folios, letters or even entire words got lost. A great deal of the damage can be dated to the winter of 1810-11, in connection with Perne's fight to overcome the difficulties of decipher-

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1. *Notices et extraits des manuscrits de la Bibliothèque du Roi et autres bibliothèques*. XVI,2. Paris 1847.

ing: his activity actually made the size of many holes grow considerably! But subsequent copies and old photographs show that the process continued; no doubt, the last losses were due to the final rescue operation, twenty years ago.

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At that time, I had already begun to collect material for an edition. I had typed a working copy (from a microfilm put at my disposal by Oliver Strunk) and collated this typed text with the original in Paris in April 1960. During the following years I returned to my material on several occasions, mainly in connection with university teaching; but for obvious reasons the material was not yet ripe for publication.

In 1971, only a few days before I went to Göttingen with a lecture on "The Hagiopolites. Problems of a critical edition", I came across a new source for §§ 56-96 and 98-99, the *Sinaiticus graecus* 1764 ("S"). This late manuscript<sup>1</sup> descends from the same manuscript as part of the Hagiopolites - their common contents being, in the main, an incomplete text of the third of the Anonymi Bellermanni - and it can be used to control or to correct many of the corrupt readings of P.<sup>2</sup>

In 1973, during a stay in Brussels, I happened to find Perne's apograph of P. The main importance of this source is that it makes us realize what the Paris manuscript looked like in 1811. For the constitution of the text it is of little help, since the later losses can be supplied by emendation, also without access to Perne.<sup>3</sup>

In April 1981, the Editorial Committee of the new subseries of Monu-

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1. More likely written in the 18th century than earlier. In his Teubner edition of the Anonymi Bellermanni, Najock describes the manuscript as *saec. XVI ut videtur variis manibus scriptus*: but the early date is only certain for the beginning, not for folios 92r sqq. - our present concern. The hand of these folios resembles that of one Nicephoros Glykys, a Sinai monk of Cretan origin, who once owned the manuscript (entry on fol. 5r: ἐκ τῶν νεκροῦρου ἱερομόναχου συναΐτου τοῦ γλυκέως κρητός).

2. In a revised shape my Göttingen lecture has been published in *Texte und Untersuchungen zur Geschichte der altchristlichen Literatur*, Band 125: *Überlieferungsgeschichtliche Untersuchungen*, hrsg. v. Franz Paschke, Berlin 1981, pp. 465-78, with the title "The manuscript tradition of the Hagiopolites: A preliminary investigation on Ancien Fonds Grec 360 and its sources".

3. I still have had no access to Theodoros Sypsomo's copy from 1856; but there is little chance that we shall learn much about the text from it - except, maybe, for a few cases where Perne was not able to read words which were lost between 1856 and 1920, the approximate date of Høeg's copy.

menta Musicae Byzantinae, the *Corpus Scriptorum de Re Musica*, at a meeting in Vienna discussed the proper way of handling the Hagiopolites. The fact is that the Paris compilation has a quite complicated structure: Its beginning contains Byzantine musical theory (§§ 1-55), but evidently reflects various stages of musical notation, some sections dealing with Coislin notation, others with Middle Byzantine notation.<sup>1</sup> The rest (§§ 56-105) consists of Ancient Greek musical theory - again, apparently, taken from various contexts: §§ 56-89 and 98 incorporate most of Anonymus III Beller-manni; § 99 is one of the diatonic scales known from Alypius; §§ 90-97 and §§ 100-105 are only known from P and S, or from P alone.

This complicated structure seemed to dictate a different treatment for each of its constituent parts. The paragraphs from the Anonymus III Beller-manni have recently been edited by Najock,<sup>2</sup> and the readings of P and S are incorporated and discussed in his editions. A re-edition would therefore be superfluous - and misleading, too, if the text were properly emended; for a solidly emended text would most certainly be far better than the text was when it got into the Hagiopolites compilation. The remaining Ancient paragraphs, on the other hand, have not been edited since 1847, and the need for a thorough revision is obvious, also because of the discovery of the Sinai manuscript. The real difficulty, however, is to be found in the Byzantine texts (§§ 1-55). For although no other direct manuscript source for these paragraphs is known, their contents have been quoted or paraphrased or referred to in many Metabyzantine treatises on music. Consequently, the entire *corpus* of later treatises ought to be sifted before our difficult text could be properly edited and provided with the necessary *Realkommentar*. This procedure, however, would not be possible as long as the texts had not been critically edited - and for such critical editions, a publication of the Hagiopolites texts would be a great help!

On the strength of these considerations, the Editorial Committee decided to edit the Hagiopolites twice: A preliminary edition should be made

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1. § 11, however, belongs to the Ancient material, and must have been moved to its present place from § 87.

2. Dietmar Najock, *Drei anonyme griechische Traktate über die Musik. Eine kommentierte Neuausgabe des Bellermannschen Anonymus. Göttinger Musikwissenschaftliche Arbeiten, Band 2, Göttingen 1972* (with a German translation). - *Anonyma de musica scripta Bellermanniana*, edidit Dietmar Najock, Leipzig 1975 (Bibliotheca Teubneriana).

immediately, in a dozen duplicated copies for distribution among the editors of the other theoretical texts and would-be collaborators. And at the end of the entire publication work - with the relevant texts accessible in the *Corpus Scriptorum de Re Musica*, or at least thoroughly studied - a full size edition, with photographs of the 44 pages of the Paris manuscript, with translation, detailed commentaries, etc. should close the series.

When I returned from Vienna and reported to my Institute's Board, our Director - Jan Pinborg - immediately suggested one change in these plans: to let my preliminary edition be printed in the *Cahiers* of the Institute, instead of manufacturing only a handful of duplicates.

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I have found it necessary to give this brief survey of the *genesis* of the present edition. Let me now proceed to describe what the reader can expect to find in it:

First and foremost it should be remembered that this "edition" is devised and planned as a *working tool*, primarily to simplify the task for the editor or editors who some day will be ready to make the final edition. In the meantime, it is my hope that others as well may find it useful, in spite of its evident imperfections. Not wishing to delay a provisional publication of the text, I decided to publish it as soon as I had worked my way through all 105 paragraphs. My notes and a good many details in the text itself reveal inconsistencies which might have been avoided if I had spent another year or more on a revision. But this, in my opinion, can as easily be done by the benevolent reader.

On the single elements of the edition I have the following remarks:  
THE GREEK TEXT: In principle, the right-hand columns render the text as found in P, including its punctuation. In two respects, however, I have had to normalize:

1. Since it is quite often impossible to see the exact shape of the breathings, I have preferred to normalize - also in the cases where the reading is clear. The opposite would have conveyed a false impression of accuracy.

2. For similar reasons I have simplified the punctuation, using a comma whenever I felt sure that this was in the manuscript, but not trying to make any distinction between "." and "'" etc. Notwithstanding this precaution I am convinced that a renewed comparison with the original will lead to a number of changes. Besides, it is my impression that many of the

punctuation signs were added later. I have not tried to render this detail in my transcript. The left-hand columns contain the texts in their emendated shape, provided with a punctuation of my own. Of course, this is not the final text: The *cruces* and blanks indicate places where I am sure that there is something wrong; but besides, there are numerous readings where I am not sure myself<sup>1</sup> - and no doubt as many where I have overlooked the difficulties.

NB. In the paragraphs which are taken over from the Anonymi Bellermanni, my aim has been to reconstruct, as far as possible, the corrupt text of the manuscript from which P and S descend. The resulting text is absurd, of course, and therefore cannot be translated. But it gives us an idea of what the compiler of the Hagiopolites had at his disposal. For the benefit of those who take an interest in the Anonymi Bellermanni, I have underlined all words which deviate from Najock's text.<sup>2</sup>

THE CRITICAL APPARATUS: I have not recorded the many misreadings of Perne's (nor the few of Høeg's), except for cases where they seem to be of some use for the constitution of the text. Also non-recorded are the cases where Perne's use of pencil reveals his working technique.<sup>3</sup>

NB. In the Anonymi Bellermanni paragraphs, the siglum "Anon" represents Najock's text. If this text is based on conjecture, a scholar's name will be added in parenthesis. If it is not the reading of all Najock's MSS (ABCD), the source will be added. If there is no parenthetical addition, the text is found in ABCD (or ABC, where D does not have the text).

The *variatio sermonis* of my Latin is unintentional.

THE TRANSLATION: The translation has been made *en route*, together with the notes. It is to be understood as a kind of running commentary, and should be used in connection with the Greek text. Frequently, especially in the beginning, it is rather a paraphrase than a translation. Passages which I

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1. These are always mentioned in the critical apparatus, normally also in the notes.

2. The underlined words in the *right-hand* columns mark off all cases where P deviates from the model manuscript (as reconstructed in the left-hand columns). I am afraid that I have not been entirely consistent in this matter, having left a number of P's orthographical peculiarities unmarked.

3. My *dossier* contains a complete material for a study of this detail. It may be of some interest, as a sample, but not in the present context.

do not understand are indicated either by questionmarks or by word-by-word translation between inverted commas. Clarifying additions are added in brackets, quite often in *Italics*.

The terminology, inevitably, has caused trouble, and my solution of the problems is far from being uniform. Quite often I have preferred to use the Greek words themselves - e.g. *Echos*, *Tonos*, *Mesos*. Some expressions have been rendered differently, depending on the context. Thus, my English text indiscriminately uses "Plagios Deuterios", "Second Plagal", and "the plagal of Deuterios".

THE NOTES: The notes deal primarily with matters which concern the wording of the Greek text. Sometimes, it has been necessary to go into the substance of the text, in connection with textual difficulties. Bits of genuine *Real-kommentar* do occur, now and then, but are never fully elaborated. The detailed commentary belongs to a future stage of the project, the authoritative *Corpus* edition.

THE INDEX: A complete *Index verborum* must also be postponed. In its present shape, the text is still so full of errors and uncertain readings that an all-comprehensive index would be misleading. At present, a selective index of terms is to be preferred. The index, however, includes a complete *Index nominum*.

The mixture of Ancient and Byzantine texts is reflected, also, in the index: Words which occur in the Ancient paragraphs (11 and 56-105) are marked off by means of the asterisk (\*). If words occur in both layers, there will be two entries.

CHAPTERS and PARAGRAPHS: Red initial letters divide the Hagiopolites text in 30 sections or chapters, of varying length.<sup>1</sup> In the parts which are common to P and S, the two manuscripts agree in their divisions, though S occasionally has extra initial letters, not found in P. Apparently, then, the system was taken over from the model manuscript. I have used Roman numbers to indicate the thirty sections of P.

The division into paragraphs is my own, except for those paragraphs that contain the Anonymus Bellermanni. Here one obviously has to keep the old

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1. The rubricator forgot to write initial letters in §§ 36, 70, and 101. The initial letters are now lost at § 4 and, presumably, at § 94. The lay-out at the beginning of § 52 is peculiar (see notes) but seems to reflect a division in the model manuscript; I have treated this place as if the indication of a new section was a regular one.

In S, all chapters have headings. These are listed in Najock 1972, p.216.

division, the one introduced by Bellermann in 1841. The following Concordance enables a rapid orientation:

Concordance of the Anonymus III Bellermanni and the Hagiopolites:

ANON	HAG	ANON	HAG	HAG	ANON	HAG	ANON
33	77	52	71	56	58	71	52
34	78	53	72	57	59	72	53
35	79	54	73	58	60	73	54
36	80	55	74	59	61	74	55
37	81	56	75	60	62	75	56
38	82	57	76	61	63	76	57
39	83			62	64		
40	84	58	56	63	65	77	33
41	85	59	57	64	66 <sup>1</sup>	78	34
		60	58			79	35
42	67	61	59	65	50	80	36
43	68	62	60	66	51	81	37
44	69	63	61			82	38
45	70	64	62	67	42	83	39
46	70a	65	63	68	43	84	40
47	70b	66 <sup>1</sup>	64	69	44	85	41
48	70c			70	45		
49	70d	66 <sup>2</sup>	86	70a	46	86	66 <sup>2</sup>
		67	87	70b	47	87	67
50	65	68	88	70c	48	88	68
51	66	69	89	70d	49	89	69
		78	98			98	78

\*

I had planned to include a thorough codicological description of P and S in the present edition and to return, also, to the discussion between Nadjock and myself on the order of the Anonymus paragraphs in P.<sup>1</sup> The latter question, however demands a quite lengthy argumentation which would lead this introduction off its track; so it better be taken up in another con-

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1. See my article referred to above (p. 2, note 2) and pp. 215-16 of Nadjock's Göttingen edition from 1972 (above, p.3, note 2).

text. As to the codicological description, it will find a more appropriate place in the final edition, with its reproductions of all 22 folios of P and a representative material from S.

At the Second International Colloquium on Greek Palaeography and Codicology (Berlin and Wolfenbüttel, October 17-21, 1983) I discussed the dating of P with a number of colleagues; the *communis opinio* still is that P was written in the first half of the 14th century. There are no visible watermarks.

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Since I began to work on this edition, a quarter of a century ago, I have discussed the text and the manuscript with a great number of friends; students, colleagues, and others. I have, in fact, drawn heavily and shamelessly on the expertise of others. It is impossible for me to specify for each of them what kind of help I have experienced, and any attempt to do so would fail to match reality. I cannot send this book to the press, however, without mentioning the names of three persons who have been more actively engaged in the final stage of the work than anybody else:

Sten Ebbesen, the Director of our Institute, to whom I am indebted for advice on text, translation, and notes for almost every paragraph. He is also the one who, in his capacity of editor of the CIMAGL, with mild but efficient pressure has forced me to keep the dead-line as settled a year ago.

Bjarne Schartau, who has been involved in the work since 1965, not the least on codicological matters. In the critical moment, where time pressure was most heavily felt, he offered his assistance and typed most of the Greek text and the critical apparatus, and also prepared the Index.

Hannah Krogh Hansen, the efficient secretary of the Institute, who has typed most of the translation and the notes, and has mounted the off-set material as competently and elegantly as could be wished for.

Jørgen Raasted

Βιβλίον Ἀγιοπολίτης, συγκεκροτημένον ἐκ τινων μουσικῶν  
μεθόδων.

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| <p>I 1. Ἀγιοπολίτης λέγεται τὸ βιβλίον, ἐπειδὴ περιέχει ἀγίων τινῶν καὶ ἀσκητῶν βίῳ διαλαμφάντων [       ] ἐν τῇ ἀ[γίῃ] πόλει</p> <p>5 τῶν Ἱεροσολύμων, συγ[γρα.....] παρὰ τε τοῦ κυροῦ Κοσμᾶ καὶ τοῦ κυροῦ Ἰωάννου τοῦ Δαμασκηνοῦ τῶν ποιητῶν.</p> | <p>P: Ἀγιοπολίτης λέγεται τὸ βιβλίον, ἐπειδὴ περιέχει ἀγίων τινῶν καὶ ἀσκητῶν βίῳ διαλαμφάντων [ 6 litt ] ἐν τῇ ἀ[ 3 ] πόλει</p> <p>τῶν Ἱεροσολύμων, συγ[ 8 ] παρὰ τε τοῦ κυροῦ κοσμᾶ καὶ τοῦ κυροῦ Ἰω τοῦ δαμασκηνοῦ τῶν ποιητῶν</p> |
|---|---|

Cf cod S fol 99r

post 2 ἐπειδὴ desinit Perne 4 [πατέρων] Vincent 5 συγ[γράμματα.] Vincent, σύγ(συγγραφέν?) Theodoros Sypsomo 6 [τοῦ ὁσίου Κοσμᾶ] Vincent, τοῦ κυροῦ K..μᾶ recte Sypsomo, τ[οῦ] ἀγ[ίου Κοσ]μᾶ Gastoué 8 post ποιητῶν ita interpunxit Vincent, ut §2,1-2 cum praecedentibus cohaereant

TRANSLATION:

Hagiopolites, a Book Put Together From Several Treatises on Music.

1. This book is called "Hagiopolites" because of its contents, works on saints and ascetes in the Holy City of Jerusalem, written by Master Cosmas and Master John of Damascus, the poets.

NOTES:

- \* 1. Until now, no convincing remedy has been found to supply the illegible words in lines 4-5. Evidently, the book got its title ("Hagiopolites") from its contents; but what kind of texts did it contain? Texts to be sung, no doubt, cf. §2,1-2; and written by Kosmas and John of Damascus. Now, if the object for περιέχει (2) did not follow until in line 5, the obvious reading would be συγ[γράμματα] and our problem would be what to supply in line 4. But if the object came already in line 4, we would like to take 5-8 as a *participium conjunctum*, an apposition to this object - to be supplied as συγγραφέντα, συγγραφέντας, or συγγραφείσας depending on our filling out of the lacuna in 4. In any case, the word missing in 4 ought then to mean "chanted pieces", and the genitives in 2-3 should be understood as "the saints and ascetes celebrated in these hymns". Concerning the illegible word in 4 we know that it was rather short (space for no more than five letters), and from the unclear traces of the top of some of its letters it seems unlikely that the word was τροπάρια or κανόνας. Maybe ὅσματα or ψόδας? Another line of thought is suggested by the related text in Vatican gr.872 (Tardo, p.164) which speaks of τῶν ἀγίων μαρτύρων ὁσίων τε καὶ λοιπῶν πολιτεῖα. Unfortunately, our illegible word cannot possibly be πολιτεῖαν; but ἔργα, perhaps. Finally, it cannot be excluded that the illegible word was an adjective, belonging to βίῳ. Βίῳ διαλαμφάντων ὁσίῳ?
- \* 2. The punctuation in lines 3 and 5 is interesting but leads to no safe interpretation of the context. The dot after διαλαμφάντων may serve to iso-

late ἀγίων - διαλαμφάντων, and the comma after Ἱεροσολύμων ought to indicate that the localization "in the Holy City of Jerusalem" refers back. But in this case, our ideas about the meaning of the first word in line 4 should be accordingly revised.

It should be remembered, however, that the punctuation of P is somewhat capricious, at times utterly misleading.

- \* 3. There is a curious conflict between the explanation of the term Hagio-polites in §1 and the use of the word in the headline. In §1, "Hagio-polites" refers to a collection of musical texts written by poets from Jerusalem, but the "Hagio-polites" of the headline is clearly described as a conglomeration of "musical methods", i.e. of theoretical texts. One possible explanation would be (1) that the title originally belonged to a collection of hymns - a τροπολόγιον, for instance - (2) that §§1-55 (or an earlier stage of this text) was written as a theoretical 'companion' (wherefore it quite naturally explained why the collection was called Hagio-polites), (3) that the 'redactor' who combined the old treatise with Ancient material (§§56-105) took over the title from §1, but added a very precise description of his own product ("put together from several treatises on music").

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| <p>2. "Ἦχους δὲ [λέγουσιν] ἐν τού-<br/>τῳ ὁκτὼ ψάλλεσθαι. ἔστι δὲ τοῦτο<br/>ἀπ[οβλητέον καὶ] ψευδές· ὁ γὰρ<br/>πλάγιος δευτέρου ὡς ἐπὶ τὸ πλεῖ-<br/>στο[ν μέσος] δεύτερος ψάλλεται,<br/>ὡς τὸ "Νίκη νῆχων Χριστέ" [καὶ<br/>ὡς τὸ "Στὴν ἐπὶ ὑδάτων" καὶ ἄλ-<br/>λα ὅσα πα[ρὰ τοῦ κυροῦ Κοσμᾶ]<br/>καὶ τοῦ κυροῦ Ἰωάννου τοῦ Δα-<br/>μασκ[ηνοῦ ἀπὸ τῆς μουσικῆς] ἐξ-<br/>[ε]τέθησαν - ὅσα δὲ [ἐποιήθησαν<br/>ὑπὸ τοῦ κυροῦ] [Ἰ]ωσήφ [καὶ]<br/>ἄλλ[ων] τ[ινῶν, εἰ] δὲ δο[κιμάσεις<br/>αὐτὰ μετὰ τῆς μουσικῆς ψάλλειν,<br/>οὐκ ἰσάζουσι διὰ τὸ μὴ ἐκτεθῆναι<br/>ὑπ' αὐτῆς - ὁμοίως δὲ καὶ ὁ πλά-<br/>γιος τετάρτου ὡς ἐπὶ τὸ πλεῖστον<br/>μέσος τέταρτος ψάλλεται, ὡς] ἐπὶ<br/>τὸ "Σταυρὸν χαράξας Μωσῆς" καὶ<br/>ἕτερα οὐκ ὀλίγα. ἔστιν οὖν ἐκ<br/>τούτων γινῶναι, ὅτι οὐκ ὁκτὼ μό-<br/>νοι ψάλλονται ἀλλὰ δέκα.</p> | <p>P: Ἦχους δε[ 3-4 ] ἐν τού-<br/>τῳ ὁκτὼ ψάλλεσθαι· ἔστι δὲ τοῦτο<br/>ἀπ[ 8 ] ψευδές· ὁ γὰρ<br/>πλάγιος δευτέρου· ὡς ἐπὶ τὸ πλεῖ-<br/>στο[ 5 ] δεύτερος ψάλλεται·<br/>ὡς τὸ, νίκη νῆχων χε' [ 7<br/>] ἐπὶ τὸν ἐπὶ ὑδάτων· καὶ ἄλ-<br/>λα ὅσα πα[ 15 ]<br/>καὶ τοῦ κυροῦ Ἰω τοῦ δα-<br/>μασκ[ 18 ] ἐξ-<br/>[1]τέθησαν· ὅσα δὲ [ 16<br/>] οὐ [1]ωσήφ [ 4 ]<br/>ἄλλ[1-2] τ [ 4 ] δὲ δο[<br/>110-130<br/>] ἐπὶ<br/>τὸ στῆρὸν, χαράξας μωσῆς· καὶ<br/>ἕτερα οὐκ ὀλίγα. ἔστιν οὖν ἐκ<br/>τούτων γινῶναι· ὅτι οὐκ ὁκτὼ μό-<br/>νοι ψάλλονται· ἀλλὰ δέκα·</p> |
|---|--|

Cf S 99r-99v

1-13 non exscripsit Perne 1 λέγουσιν (vel aliud verbum dicendi) supple-  
dum esse censeo 1-2 ἦχους δέ[δεικται μόνους] ὁκτὼ φάλλεσθαι Vincent,  
"ἦχους δὲ ἐν τούτῳ ὁκτὼ φάλλεσθαι Sypsomo, ἦχους δ[εδεικται μόνους κα?]τα  
τα (?) ὁκτὼ φάλλεσθαι Gastoué 2 ἔστι] ἔτι Thibaut 3 ὑπ[όβλητον καὶ]  
φευδές Thibaut, ἀπ[ο]δοδελεγμένον(?) φευδές Sypsomo, [σοι δ'] ἀπ[ο]δεῖξω] φευ-  
δές Thibaut 3 γὰρ - 13 non exscripsit Høeg 10-18 e codice S restitui,  
cf Thibaut (p 57, e cod Metoch 811) 14-18 deperditi, inferiore folii  
primi parte amissa

#### TRANSLATION:

2. For the songs in this book eight Echoi are said to be necessary. But this is not true and should be rejected. In fact, the Plagios of Deuterios is mostly sung as Mesos Deuterios - e.g. the Νύκην ἔχων Χριστέ, the Σε τὸν ἐπὶ ὕδατων, and other pieces written by Master Cosmas and Master John of Damascus "from the Mousike". (If, however, you try to sing the products of Master Joseph and others "with the Mousike", they will not fit, having not been composed "according to the Mousike"). Similarly, the Plagios of Tetartos is mostly sung as Mesos Tetartos - e.g. when you sing Σταυρὸν χαράξας Μωσῆς and many others. From these cases we can see that ten Echoi are used (for the repertory of this book?) and not eight, only.

#### Notes:

- \* 1. My reconstruction of 10-18 differs in some details from the one suggested by Thibaut.
- \* 2. The distinction in 8-16 between Hagiopolitan and Studite tradition is to be observed.
- \* 3. I do not understand the implications of 10 ἀπὸ τῆς μουσικῆς, 14 μετὰ τῆς μουσικῆς, and 16 ὑπ' αὐτῆς.

3. Δεῦ δὲ ἐν τῷ μέλλειν ἡμᾶς  
φάλλειν ἢ διδάσκειν ἄρχεσθαι με-  
τὰ ἐννηχήματος. ἐνήχημα δὲ ἐστὶν  
ἡ τοῦ ἦχου ἐπιβολή, οἷόν τι λέ-  
5 γω "ἄνα, ναὶ ἄνες"· ὅπερ ἐστὶν  
"ἄναξ, ἄνες"· πᾶν γὰρ τὸ ἀρχόμε-  
νον ἀπὸ θεοῦ ὀφείλει ἔχειν τὴν  
ἀρχὴν καὶ εἰς τὸν θεὸν καταλή-  
γειν.

P: δεῦ δὲ ἐν τῷ μέλλειν ἡμᾶς  
φάλλειν ἢ διδάσκειν, ἄρχεσθαι με-  
τὰ ἐννηχήματος· ἐνήχημα δὲ ἐστὶν,  
ἡ τοῦ ἦχου ἐπιβολή· οἷόν τι λέ-  
γω· ἄνα, ναὶ ἄνες· ὅπερ ἐστὶν,  
ἄναξ, ἄνες· πᾶν γὰρ τὸ ἀρχόμε-  
νον, ἀπὸ θεοῦ ὀφείλει ἔχειν τὴν  
ἀρχὴν καὶ εἰς τὸν θεὸν καταλή-  
γειν:-

Cf S 99v

4 ἐπιβουλῇ ante correcturam P (υ erasit corrector) 6 post ἄναξ olim  
ναὶ suppleui, sed est superfluum

## TRANSLATION:

3. When we are going to sing - or to teach - we must begin with an Enechema. This term denotes the introduction of the Echos - *ananeanes*, for instance, which means "O Lord, forgive". The reason (of this invocation) is that whatever begins ought to begin "from God" and to end, as well, "in God".

## NOTES:

- \* 1. Ἐπιβολή (4) is also used by S in the corresponding passage. Elsewhere, the tradition wavers between ἐπιβολή and ὑποβολή (§§6, 7, 33, 45).
- \* 2. In line 5, the orthography of P has been retained, against the normal spelling ἀνανεανέες. The pious pun would come out more clearly if the echematic word had been rendered as ἀναξ, ναὶ ἄνες ("O Lord, forsooth, forgive") - but many parallels read without ναὶ.

- II 4. [Ἰστ]έον δέ, ὅτι ὁ πρῶτος καὶ δεύτερος καὶ τρίτος οὐ[κ εἰ-  
σ]ὶν ὀνόματα τῶν ἡχῶν κύρια· ἀλ-  
λὰ διὰ τὸ κα[τά τ]άξιιν καὶ οἶον  
5 ἐν βαθμοῖς κεῖσθαι τοὺτους, [ὁ  
μὲν π]ρῶτος λέγεται πρῶτος ὡς  
πρῶτος κείμε[νος,] ὁ δὲ δεύτερος  
<δεύτερος> ὡς μετὰ τὸν πρῶτον,  
καὶ [οἱ ἄλλοι ὁ]μοίως· ὡς ἐὰν εἴ-  
10 ποιμι "ὁ υἱὸς τοῦ δ[εῖνα] ὁ [πρῶ-  
το]ς ἢ ὁ δεύτερος", οὐ τὸ [κύ]-  
ριον ὄνομα [ ] δη  
[λῶ? ] ἀλλὰ τῇ[ν]τάξιιν τῆς  
αὐτοῦ [γενέσεως.]
- P: [ 3 ]έον δέ ὅτι ὁ πρῶτος·  
καὶ δεύτερος· καὶ τρίτος· οὐ[ 4  
]ὶν ὀνόματα τῶν ἡχῶν κύρια, ἀλ-  
λὰ διὰ τὸ κα[ 4 ]άξιιν· καὶ οἶον  
ἐν βάθμους κεῖσθαι τοὺτους· [  
5 ]ρῶτος, λέγεται πρῶτος, ὡς  
πρῶτος κείμε[ 5 ] ὁ δὲ δεύτερος,  
ὡς μετὰ τὸν πρῶτον,  
καὶ [ 7 ]μοίως, ὡς ἐὰν εἴ-  
ποιμι ὁ υἱὸς τοῦ δ[ 4 ] ὁ [  
4 ] ἢ ὁ δεύτερος, οὐ τὸ [ 2 ]  
ριον ὄνομα [ 13 ] δη  
[ 6 ] ἀλλὰ τῇ[ 3 ]τάξι[ 2 ] τῆς  
αὐτοῦ [ 8 ]

Cf S 33v et 99v

1-4 lacunas suppleuit Thibaut 5 βάθμους P, correxit Thibaut 5-6 ὁ  
μὲν] ὁ tantum suppleuit Thibaut, spatium tamen ὁ μὲν supplendum esse de-  
monstrat 7 κείμενος restituit Thibaut 8 δεύτερος addidi 9-11 la-  
cunas suppleui, aliter atque Thibaut qui 9 οἱ λοιποὶ et 10-11 τοῦ δὲ πρῶ-  
του υἱὸς ἢ maluit 10 post τοῦ vocem δευτερου videri posse credidit Per-  
ne 11-14 οὐ τὸ κύριον ὄνομα [τοῦ ἡχου] δη[λοῦ] ἀλλὰ τὴν [τά]ξιιν τῆς  
αὐτοῦ[ς] ποιότητος Thibaut, contra sensum et magnitudinem spatiorum  
11 κύριον - 14 non exscripsit Perne

## TRANSLATION:

4. NB. "First", "Second", and "Third" are not proper names for the Echoi. But since the Echoi are placed in order, stepwise as it were, the first Echos is called "the First" because it is placed first. The second Echos is called "Second" because it follows upon "the First", and so on. Just as when I say "the first or second son of so-and-so", this is not his real name.....but indicates his order of birth.

## NOTES:

- \* 1. For the end of this paragraph (9-14) the parallel in S runs as follows: τὸ γὰρ εἶπεῖν πρῶτος, δεύτερος, βαθμοὶ εἰσὶ, καὶ οὐχὶ κύρια ὀνόματα. οὖν τι λέγω, τίς οὗτος; ὁ υἱὸς τοῦ ὁ δευτέρου ὁ πρῶτος. ἄρα ἀνώνυμος ἐστὶ πάντως; ἢ δημήτριος λέγεται, ἢ θεόδωρος. μόνον δὲ ἀπαρίθμησις ἐστὶ, πρῶτος, δεύτερος, τρίτος. ἀλλ' ὁ καθεὶς ἕκαστος ἕδιον κέκμηται ὄνομα ἐκ τῶν εὐρόδωντων τοὺς ἤχους μουσικῶν.
- \* 2. The δη at the end of line 12 is followed by an oblique stroke (δη\). This stroke, which may be a gravis or the top of the letters α or λ, makes it possible to use Thibaut's δη[λοῦ] - but not the δη[μήτριος] suggested by the passage from S quoted in the preceding note. Furthermore, there seems to be a *spiritus lenis* before δη ('δη\).
- \* 3. Thibaut's ποιότητος (end of 14) rests on a misunderstanding of §30,1-6. My own γενέσεως is only a suggestion; other synonyms might be envisaged, e. g. υἰότητος.

5. [τὰ δὲ κύρια ὀνόματα τῶν ὁκ-  
τῶ ἤχων εἰσὶ ταῦτα· ὑποδώριος ὁ  
πρῶτος, ὑποφρύγιος ὁ δεύτερος,  
ὑπολύδιος ὁ τρίτος, δώριος ὁ τέ-

105-120

5 τάρτος, φρύγιος ὁ πλάγιος πρῶ-  
τος, λύδιος ὁ πλάγιος τοῦ δευτέ-  
ρου, μιξολύδιος ὁ βαρύς, ὑπομιξο-  
λύδιος ὁ πλάγιος τέταρτος.

2r [γίλος πρῶ-  
τος· λύδιος ὁ πλάγιος τοῦ δευτέ-  
ρου· μιξολύδιος, ὁ βαρύς· ὑπομιξο-  
λύδιος, ὁ πλάγιος τέταρτος·

Cf S 100r

1-5 propter amissionem inferioris folii partis deperditos restituit Thibaut ex ingenio; eadem fere habet S 1-3 Ταῦτά εἰσι τὰ κύρια ὀνόματα τῶν ἤχων voluit Thibaut, sed magis placet quod scripsi

## TRANSLATION:

5. The proper names of the eight Echoi are the following: The first Echos is called Hypodorios, the second Hypophrygios, the third Hypolydios, the fourth Dorios, the first plagal is called Phrygios, the plagal of the second Lydios, Barys is called Mixolydios, and Plagios Tetartos is called Hypomixolydios.

6. Οἱ μὲν οὖν τέσσαρες πρῶτοι οὐκ ἐξ ἄλλων τινων ἀλλ' ἐξ αὐτῶν γίνονται. οἱ δὲ τέσσαρες δευτέ-  
 5 ροι, ἦγουν οἱ πλάγιοι, ὁ μὲν πλά-  
 γιος πρῶτος ἐκ τῆς ὑπορροῆς τοῦ πρῶτου γέγονε. καὶ ἀπὸ τῆς ὑπορ-  
 ροῆς τοῦ πληρώματος τοῦ δευτέ-  
 ρου γέγονεν ὁ πλάγιος δευτέρου·  
 10 ὡς ἐπὶ τὸ πλεῖστον δὲ καὶ τὰ πλη-  
 ρώματα τοῦ δευτέρου <εἰς τὸν πλά-  
 γιον δευτέρου> τελειοῦ. ὁ βαρὺς  
 ὁμοίως καὶ ἀπὸ τοῦ τρίτου· καὶ  
 γὰρ εἰς τὸ ἄσμα ἡ ὑποβολὴ τοῦ  
 βαρέως τρίτος ψάλλεται ἅμα τοῦ  
 15 τέλους αὐτοῦ. καὶ ἀπὸ τοῦ τετάρ-  
 του γέγονεν ὁ πλάγιος τέταρτος.  
 καὶ ἀπὸ τῶν τεσσάρων πλαγίων ἐ-  
 γεννήθησαν τέσσαρες μέσοι· καὶ  
 ἀπ' αὐτῶν αἱ τέσσαρες φθοραί. καὶ  
 20 ἀνεβιβάσθησαν ἦχοι ὑς', οἷτινες  
 ψάλλονται εἰς τὸ ἄσμα, οἱ δὲ δέ-  
 κα ὡς προείπομεν εἰς τὸν Ἀγιο-  
 πολίτην.

2fin-12: Eadem fere habet S fol 100r-v. Cf etiam infra, §§47-48.

4-6 ὁ μὲν - γέγονε] καὶ γὰρ ἀπὸ τῆς ὑπορροῆς τοῦ α<sup>ou</sup> γέγονεν ὁ πλάγιος  
 α<sup>os</sup> S 8 ὁ πλάγιος β<sup>os</sup> S 9 δὲ om S 10-11 εἰς τὸν πλάγιον δευτέρου  
 conieci (cf §48, 15) 11 post βαρὺς (non post τελειοῦ) distinguunt PS  
 16 ὁ πλαγίου δ<sup>ou</sup> S 17-18 καὶ ἀπ' αὐτῶν τῶν τεσσάρων πλαγίων ἐγεννήθησαν  
 οἱ δ<sup>ou</sup> (sic) μέσοι S ἐγεννήθησαν melius cum S scribendum 19 αὐτῶν]  
 αὐτῶν τῶν μέσων ἐγεννήθησαν S 20 ἀνεβιβάσθησαν cum S legendum, ἀνε-  
 βι θησαν Høeg, ἀνεβιέσθησαν Thibaut (quod dubitavit Høeg) 20-23 οἷ-  
 τινες - Ἀγιοπολίτην] τούτων δὲ τῶν ὑς' ἀναβιβαζομένων ψάλλονται εἰς τὸ  
 ἄσμα οἱ αὐτοὶ ὑς'. εἰς δὲ τὸν ἀγιοπολίτην ὑς' καὶ μόνον καθὼς προείπομεν S

#### TRANSLATION:

6. The four Echoi which come first are generated from themselves, not from others. As to the four which come next, i.e. the Plagal ones, Plagios Protos is derived from Protos, and Plagios Deuterios from Deuterios - normally Deuterios melodies end in Plagios Deuterios. Similarly, Barys from Tritos - "for

P: οἱ μὲν οὖν τέσσαρες πρῶτοι· οὐκ ἐξ ἄλλων τινῶν, ἀλλ' ἐξ αὐτῶν γίνονται· οἱ δὲ τέσσαρες δευτέ-  
 ροι, ἦγουν οἱ πλάγιοι· ὁ μὲν πλά-  
 γιος πρῶτος, ἐκ τῆς ὑπορροῆς τοῦ πρῶτου γέγονε· καὶ ἀπὸ τῆς ὑπορ-  
 ροῆς τοῦ πληρώματος τοῦ δευτέ-  
 ρου, γέγονεν, ὁ πλάγιος δευτέρου·  
 ὡς ἐπὶ τὸ πλεῖστον δὲ καὶ τὰ πλη-  
 ρώματα τοῦ δευτέρου,  
 τελειῶ ὁ βαρὺς·  
 ὁμοίως καὶ ἀπὸ τοῦ τρίτου· καὶ  
 γὰρ εἰς τὸ ἄσμα. ἡ ὑποβολὴ τοῦ  
 βαρέως, τρίτος ψάλλεται, ἅμα τοῦ  
 τέλους αὐτοῦ· καὶ ἀπὸ τοῦ τετάρ-  
 του γέγονεν, ὁ πλάγιος τέταρτος·  
 καὶ ἀπὸ τῶν τεσσάρων πλαγίων, ἐ-  
 γεννήθησαν τέσσαρες μέσοι· καὶ  
 ἀπ' αὐτῶν αἱ τέσσαρες φθοραί· καὶ  
 ἀνεβιβάσθησαν ἦχοι τς'· οἷτινες  
 ψάλλονται εἰς τὸ ἄσμα. οἱ δὲ δέ-  
 κα ὡς προείπομεν εἰς τὸν ἀγιο-  
 πολίτην.

in the Asma the Hypobole of Barys is sung as Tritos together with its ending" (?). And from Tetartos came Plagios Tetartos. From the four Plagioi originate the four Mesoi, and from these the four Phthorai. This makes up the sixteen Echoi which are sung in the Asma - as already mentioned, there are sung only ten in the Hagiopolites.

#### NOTES:

- \* 1. For the way in which the Echoi are generated from others, the text uses different expressions, all of which are elaborations of the simple γίνονται ἐξ in lines 2-3: ὁ Α ἐκ τῆς ὑποροῆς τοῦ Β γέγονε (4-6) / ἀπὸ τῆς ὑποροῆς τοῦ πληρώματος τοῦ Β γέγονεν ὁ Α (6-8) / τὰ πληρώματα τοῦ Β εἰς τὸν Α τελειοῦ (9-11) / ἡ ὑποβολὴ τοῦ Α Β ψάλλεται ἅμα τοῦ τέλους αὐτοῦ (13-15) / ἀπὸ τοῦ Β γέγονεν ὁ Α (15-16) / ἀπὸ τῶν Β ἐγεννήθησαν Α (17-18). This is evidently to be taken as a *variatio sermonis*; but what, exactly, is meant by ὑποροή, πλήρωμα, τέλος (and τελειόω)? Ψάλλεται in line 14 points towards actual singing rather than towards pure theory.
- \* 2. The misleading punctuation of P in line 11 (after ὁ βαρύς instead of before) is shared by S. Was it already in their common ancestor?
- \* 3. In lines 17-18, the reading of P (ἐγεννήθησαν) is probably the *lectio facillior*, inspired by the preceding forms of γίνομαι.
- \* 4. The verb ἀνεβιβάσθησαν (20) implies that the four groups of Echoi are added together. For οἱ δέκα, the verb ψάλλονται is to be supplied from the relative clause.

7. Καὶ γὰρ μέσος πρῶτος εἰς τὴν	P: καὶ γὰρ μέσος πρῶτος εἰς τὴν
ἀρχὴν τῆς ὑποβολῆς καὶ τέλος	ἀρχὴν τῆς ἐπίβολῆς καὶ τέλος
τοῦ πλαγίου πρώτου καὶ ἀρχεται	τοῦ πλαγίου πρώτου καὶ [ἀρ]χεται
καὶ τελειοῦται· ἡμιπλαγιοτεταρ-	καὶ τελειοῦται· ἡμιπλαγιοτετ[αρ]-
5 τίζει δὲ μόνον, καὶ τοῦτο ἔχει	τίζ[ει] [δὲ] μό[νον] καὶ τοῦτο ἔχει
ἐπέκεινα τοῦ πα'. ὁμοίως καὶ ἂ-	2v ἐπέκεινα τοῦ πα ὁμοί[ως] καὶ ἂ-
πὸ τοῦ πβ' ὁ μέσος δεύτερος.	πὸ τοῦ πβ' ὁ μέσος δεύτερος·
ψάλλεται δὲ καὶ ἀπὸ τοῦ βαρέως	ψάλλεται δὲ καὶ ἀπὸ τοῦ βαρέως
πάλιν ὁ μέσος τρίτος, καὶ ἀπὸ	πάλιν, ὁ μέσος τρίτος· καὶ ἀπὸ
10 τοῦ πδ' ὁ μέσος τέταρτος.	τοῦ πδ' ὁ μέσος τέταρτος·

Eadem fere habet S (100v). Cf etiam infra, §33,11-25

2 ἐπιβολῆς P, ὑποβολῆς S    τέλος] τὸ τέλος S, fortasse recte    3 sqq in  
litteris supplendis S usus sum    3 τοῦ om S    5 δὲ μόνον] 'Ὁμοίως con-  
iecit Thibaut qui post ἡμιπλαγιοτεταρτίζει interpunxit    9 πάλιν om S

#### TRANSLATION:

7. For Mesos Protos begins and ends "at the beginning and end of the Hypobole of Plagios Protos" (?); it somehow reminds of Plagios Tetartos, the only feature which makes it different from Plagios Protos. And in a similar way, Mesos Deuterios is related to Plagios Deuterios. Again, Mesos Tritos is sung from Barys, and Mesos Tetartos from Tetartos.

## NOTES:

- \* 1. The καὶ γάρ in line 1 seems to imply that §7 explains the reduction from sixteen to ten Echoi referred to in §6. But how is that to be understood?
- \* 2. Although the wording of this damaged paragraph can be restored with considerable safety, thanks to the version of S and the parallel in §33, several details remain unclear. Ὑποβολή in S and ὑπερβολή in §33 suggest that P's ἐπυβολή is wrong; but the meaning of ὑποβολή is as unclear here as it was in §6. Cf. also §45 note 2.

- |  |   |
|--|---|
| <p>8. Ἦσαν μὲν οὖν &lt; μέλη &gt; καὶ<br/>         πρὸ τοῦ γενέσθαι τοὺς ἦχους,<br/>         πλήν ᾄηκα καὶ ἀνάρμοστα καὶ τὴν<br/>         φύσιν πρὸς κραυγὴν καὶ βίαν ἐκ-<br/>         5 βιάζοντα· ἃ καὶ παρὰ τῶν θείων<br/>         κανόνων ἐκωλύθησαν.</p> | <p>P: ἦσαν μὲν οὖν καὶ<br/>         πρὸ τοῦ γενέσθαι τοὺς ἦχους·<br/>         πλήν, ᾄηκα καὶ ἀνάρμοστα· καὶ τὴν<br/>         φύσιν προσκραυγὴν καὶ βίαν ἐ-<br/>         βιάζοντα· ἃ καὶ παρὰ τῶν θείων<br/>         κανόνων ἐκαλήθησαν·</p> |
|--|---|

Cf S 100v

1 μέλη suppleui duce S 4-5 ἐκβιάζοντα S, ἐβιάζοντα P, ἐβιάζοντο Thibaut  
 et Høeg 6 ἐκωλύθησαν scripsi, ἐκολύθησαν S, ἐκαλήθησαν P Thibaut Høeg

## TRANSLATION:

8. Melodies, then, existed also before the Echoi came into being. But they were without Echos and harmony, and forced nature towards screaming and violence; this, too, was forbidden by the Sacred Decrees.

## NOTES:

- \* 1. Cf. Kanon 75 of the 6th Ecumenical Council: Τοὺς ἐπὶ τῇ ψάλλειν ἐν ταῖς ἐκκλησίαις παραγινόμενους βουλόμεθα μῆτε βοᾷς ἀτάκτοις κεχρησθαι καὶ τὴν φύσιν πρὸς κραυγὴν ἐκβιάζεσθαι, μῆτε τι ἐπιλέγειν τῶν μὴ ἐκκλησιᾷ ἀρμοδίων τε καὶ οἰκείων.
- \* 2. ᾄηκα καὶ ἀνάρμοστα, for which the latter reflects the τὰ μὴ ἀρμόδια of note 1, imply that these melodies sounded unpleasantly and were not fit for being used in church.

- |  |   |
|--|---|
| <p>9. Οὐκ ἔστιν οὖν εὐρεῖν οὔτε<br/>         &lt; ἦχον ? &gt; μέλους ἐκτός, οὔτε<br/>         μέλη μὴ μετὰ ἡχήματος. ἔστι δὲ<br/>         μέσον τοῦ μέλους καὶ τοῦ ἦχου<br/>         5 τὸ μελίσθεν τροπάριον· οὐκ ἄλ-<br/>         λως δὲ μελίζεται, εἰ μὴ διὰ<br/>         τόνων.</p> | <p>P: οὐκ ἔστιν οὖν εὐρεῖν, οὔτε<br/>         μέλους ἐκτός, οὔτε<br/>         μέλει μὴ μετὰ ἡχήματος· ἔστι δὲ<br/>         μέσον τοῦ μέλους καὶ τοῦ ἦχου,<br/>         τὸ μελίσθεν τροπάριον· οὐκ ἄλ-<br/>         λως δὲ μελίζεται, εἰ μὴ δια-<br/>         τόνων·</p> |
|--|---|

2 ἦχον vel ἦχους supplendum 3 μέλη scripsi, μέλει P, μέ<λους ἐντός> εἰ  
 coniecit Høeg

## TRANSLATION:

9. Well, then, neither can an Echos be found without a melody, nor melodies without an Echema. As to the sung Troparion, this is to be placed in between the melody and the Echos; singing, however, always implies Tonoι.

- 
10. Τόνος δέ ἐστιν πρὸς ὃν ᾄδο- P: τόνος δέ ἐστιν πρὸς ὃν ᾄδω-  
 μεν, καὶ τὴν φωνὴν εὐρυτέραν μεν, καὶ τὴν φωνὴν εὐρυτέραν  
 ποιοῦμεν· ὁ δὲ τόνος εὐρέθη ἐκ ποιοῦμεν· ὁ δὲ τόνος εὐρέθη ἐκ  
 τῶν τῆς μουσικῆς χορδῶν. ἀριθμὸς τῶν τῆς μουσικῆς χορδῶν. ἀριθμὸς  
 5 δὲ τόνων ὅσος καὶ μουσικῆς, ἄνευ δὲ τόνων, ὅσος καὶ μουσικῆς ἄνευ  
 τῶν τριῶν ἡμιτόνων καὶ τῶν τεσ- τῶν τριῶν ἡμιτόνων, καὶ τῶν τεσ-  
 σάρων λεγομένων πνευμάτων στοι- σάρων λεγομένων πνευμάτων στοι-  
 χείων καὶ τῆς ἀπορροίας τοῦ κεν- χείων· καὶ τῆς ἀπορροίας τοῦ κεν-  
 τήματος καὶ τοῦ ὑψιλοῦ ἦτοι τῆς τήματος καὶ τοῦ ὑψιλοῦ ἦτοι τῆς  
 10 φθορᾶς. φθορᾶς·  
 3 οἱ δὲ τόνοι εὐρέθη[σαν] Thibaut

## TRANSLATION:

10. Tonos is that from which we sing and make our voice "broader". It was found from the chords of the Mousike. The number of Tonoι is as great as that of (the Tonoι in ancient) music - without the three Hemitonoι and the four signs (στοιχεῖα) called Pneumata and "the derivate of Kentema and Hypsilon, i.e. the Phthora".

## NOTES:

- 
- \* 1. "The number of τόνοι is as great as that of music". The text may be corrupt. If not, it is at least most imprecisely expressed. Rather close parallels to our text are found in Tardo, *Melurgia*, p. 167 (Πόσοι τόνοι εἰς τὸν Ἀγιοπολίτην; ὅσα καβάλλα ἔχει ἡ τελεῖα μουσική, from Vat.gr.872, Høeg's punctuation) and p. 212 (Τόνοι μὲν εἰσὶ πεντεκαίδεκα· εἰ δὲ καὶ ἀπειρῆς, ἐρώτησον πόσα κάβαλα ἔχει ἡ τελεῖα μουσική καὶ εὐρήσεις τὰ πάντα· ὁῦλον ὅτι καὶ τόνοι· εἰσὶ κατὰ ἀναλογίαν τούτων, from Lavra 1656). The expression ἡ τελεῖα μουσική reminds of the Ancient τέλειον σύστημα (the double octave consisting of 15 notes); the number 15 happens to be the number of chords of the πεντεκαίδεκάχορδον ὄργανον; below (§101) it is said that Pythagoras called his four-stringed Organon μουσική. The analogy adduced in §10 evidently has some connection with such reminiscences of Ancient musical theory, though it is quite probable that the author (or his sources) had no clear picture of what he was talking about. Τόνοι is here to be taken for "musical signs" rather than musical sounds - and the καβάλλα of the "Hagiopolitan" tradition suggests that the Ancient phenomena to which the Tonoι were compared were also understood (or misunderstood?) as musical signs, though chances are that they in an older version must have been strings or chords. At present, however, it is advisable to keep the text as it is, rather than to emend it, e.g. into ἀριθμὸς δὲ τόνων ὅσος καὶ τῶν καβαλλῶν (or τῶν χορδῶν?) τῆς τελεῖας μουσικῆς.
- \* 2. For the Phthora (9-10), see below §16.
-

11. Τὰ δὲ ὀνόματα τῶν δεκαπέντε P: τὰ δὲ ὀνόματα τῶν δεκαπέντε  
 τῆς μουσικῆς καβαλλίων εἰσὶ ταῦ-  
 τα·  
 προσλαμβανόμενος· ζῆτα ἑλλιπὲς  
 5 καὶ ταῦ πλάγιον.  
 ὑπάτη ὑπατῶν· γάμμα ἀπεστραμμέ-  
 νον καὶ γάμμα ὀρθόν.  
 3r παρυπάτη ὑπατῶν· βῆτα ἑλλιπὲς  
 καὶ γάμμα ὑπτιον.  
 10 ὑπατῶν διάτονος· φῖ καὶ δίγαμμα.  
 ὑπάτη μέσων· σίγμα καὶ σίγμα.  
 παρυπάτη μέσων· ρ καὶ υ.  
 μέσων διάτονος· μ καὶ π καθειλ-  
 κυσμένον.  
 15 μέση· ἰῶτα καὶ λ πλάγιον.  
 τρίτη συνημμένων· θ καὶ λ ἀν-  
 εστραμμένον.  
 συνημμένων διάτονος· γ καὶ ν.  
 <νήτη> συνημμένων· ῶ τετράγωνον  
 20 ὑπτιον καὶ ζ.  
 παραμέση· ζ καὶ π πλάγιον.  
 τρίτη διεξευγμένων· ε τετράγω-  
 νον καὶ π ἀνεστραμμένον.  
 διεξευγμένων διάτονος· ῶ τετρά-  
 25 γωνον ὑπτιον καὶ ζ.  
 νήτη διεξευγμένων· φῖ καὶ πλά-  
 γιον κ.  
 τρίτη ὑπερβολαίων· υ κάτω νεῦον  
 καὶ ἡμίαλφα ἀριστερόν ἀνεστραμ-  
 30 μένον.  
 ὑπερβολαίων διάτονος· μ καὶ π  
 καθειλκυσμένον ἐπὶ τὴν ὀξύτητα.  
 νήτη ὑπερβολαίων· τ καὶ λ πλά-  
 γιον ἐπὶ τὴν ὀξύτητα.
- P: τὰ δὲ ὀνόματα τῶν δεκαπέντε  
 τῆς μουσικῆς καβαλλίων, εἰσὶ ταῦ-  
 τα·  
 προσλαμβανόμενος, ζῆτα ἑλλιπὲς  
 καὶ τὸν πλάγιον·  
 [ύ]πάτη ὑπατῶν γάμμα ἀντεστραμμέ-  
 νον· καὶ γάμμα ὀρθόν·  
 παρυπάτη ὑπατῶν· βῆτα ἑλλιπὲς  
 καὶ γάμμα ὑπτιον·  
 ὑπατῶν διάτονος· φῖ καὶ δίγαμμα·  
 ὑπάτη μέση, σίγμα καὶ σίγμα·  
 παρυπάτη μέσον· ρ καὶ υ  
 μέσων διάτονος· μ καὶ π· καθειλ-  
 κυσμένον·  
 μέση ἰῶτα· καὶ λ πλάγιον·  
 τρίτη συνημμένων, θ καὶ λ· ἀν-  
 εστραμμένον·  
 συνημμένων διάτονος· γ καὶ ν·  
 συνημμένων· ῶ τετράγωνον  
 ὑπτιον καὶ ζ·  
 παραμέση ζ καὶ π πλάγιον·  
 τρίτη διεξευγμένων· καὶ τετράγω-  
 νον καὶ π ἀνεστραμμένον·  
 διεξευγμένων διάτονος· ῶ τετρά-  
 γωνον ὑπτιον καὶ ζ·  
 νήτη διεξευγμένων φῖ καὶ πλά-  
 γιον κ  
 τρίτη ὑπερβολαίων· υ κάτω νεύων  
 καὶ ἡμίαλφα ἀριστερόν ἀνεστραμ-  
 μένον·  
 ὑπερβολαίων διάτονος μ καὶ π·  
 καθειλκυσμένον ἐπὶ τὴν ὀξύτητα·  
 νήτη ὑπερβολαίων, τ καὶ λ πλά-  
 γιον ἐπὶ τὴν ὀξύτητα· :-

4-34 (= Anon §67) habet S 95r, cum notis musicis; 4-5 cf infra, §87

4 προσλαμβανόμενος S 5 ταῦ Anon, τὸν P, τ S 6 γάμμα] γάμμα (sed an-  
 te correcturam γράμμα) ἀριστερά S, γράμμα AnonC 6-7 ἀντεστραμμένον P  
 7 γράμμα ante correcturam S 10 δύγαμον S 11 μέση P, μέσον S 12 παρ-

υπάτην S μέσον P (et S ante correcturam?) ρ καὶ υ] ρ ὀρθὸν καὶ σύγ-  
 μα ἀνεστραμμένον S, ρ καὶ σ ἀνεστραμμένον Anon 13 μέσον S μϋ καὶ πτ A-  
 non, μϋ ὀρθὸν καὶ σύγμα S (qui tamen Γ id est πτ καθελκυσμένον scribit)  
 15 ἰῶτα ἢ πλάγιον, κάππα S (ΙΧ praebens) 16 συνημμένον S 16-17 θῆ-  
 τα ὀρθὸν καὶ λάμβδα διεστραμμένον S (θ<) 18 συνημμένον S γάμμα καὶ  
 νϋ S 19 νήτη suppleuit Thibaut (habent S et Anon) συνημμένον S  
 19-20 ω μέγα τετράγωνον ὕπτιον καὶ ζῆτα ἐλλιπές S (Ωα) 21 παραμέσῃ P,  
 παράμεσος Anon, περίμεσος S ζῆτα ὀρθὸν καὶ πτ πλάγιον S 22 διεξευγ-  
 μένον S ε ] καὶ P 22-23 τετράγωνον S 23 πτ S 24 διάτονος διε-  
 ζευγμένον S 24-25 τετράγωνον S 25 ζ ] ζῆτα ἐλλιπές S 26 διεξευγμέ-  
 νον S 26-27 φτ καὶ πλάγιον π P, φτ πλάγιον καὶ ἡ ἀμελητικόν Anon, φτ πλά-  
 γιον καὶ ἦτα ἀμελητό S 28 νεύων P 29 ἡμίαλφα] ἥμισυ φτ.S (Π) 29-30 ἀντεστραμμένον S 31 μϋ καὶ πτ S 33 ἰῶτα καὶ λάμβδα S

#### TRANSLATION:

11. The names of the fifteen signs of the Mousike are the following: Follows the 18(!) tones of the Lydian diatonic scale (Alypius 1), with description of the shape of each pair of signs, but without the signs themselves. See notes.

#### NOTES:

- \* 1. There is no doubt that the Lydian diatonic scale (= Anon §67 = Alypius scale 1) was transferred to its present position in §11 from an original place between Anon §§ 66 and 68 (= Hagiopolites §§86-88). To Najock (ed. 1972 p.216) the τὸν πλάγιον of P in line 5 is so different from P's reading in §87 (ταῦτα πλάγιον) that §11 cannot (at least "wohl nicht") have been copied from the same source (an Anon-MS) as the line in §87. For this reason Najock's 1975-edition does not mention P's readings in §11. However, it seems to be much more likely that one badly written word in one MS (the common ancestor of P and S) produced τ in S and τὸν or ταῦτα in P (the latter, maybe due to the intrusion of a clarifying interlinear ταῦ?) - than to make both scribes commit independent mistakes when copying this particular ταῦ πλάγιον from their model MSS. From the wording in §87 it is evident that the transfer was a deliberate one. It is not easy, however, to decide whether the transmission took place in P itself or in one of its ancestors.
- \* 2. The first phrase announces a list of "the names of the 15 καβάλλια τῆς μουσικῆς", but the list must have been removed to give room for the 18 names (and graphical symbols?) of the notes in the Lydian diatonic scale. From §13 we can see that the list, in all likelihood, comprised 12 "simple" signs and 3 "compound" ones - the latter being the Xeron Klasma, the Mega Kratema, and the Kouphisma. See also below, ad §22.
- \* 3. The υ in 12 may derive from a musical sign in a previous MS (↵ = σύγμα ἀνεστραμμένον). In 21, one should perhaps restore παράμεσος (cf. περίμεσος in S). In 26-27, the error of P is hard to explain; notice, however, that S in line 15 has a similar set of misunderstood elements (ἦ / πλάγιον / κάππα). The other errors of P (in 6-7,11,13-14,19,22,28) are simple scribal mistakes, easily corrected by means of S and Anon.

- \* 4. The list is written consecutively in P and S. S includes the notational symbols (see Najock 1975). The unsystematic way in which P treats the blank might indicate that his model MS had blanks, only, without the notational symbols.

III 12. Σημείωσαι ὧδε περὶ τόνων ἀ- P: Σημείωσαι ὧδε· περὶ τόνων ἀ-  
πλῶν καὶ συνθέτων καὶ ὁποῖα δεῦ πλῶν καὶ συνθέτων καὶ ὁποῖα δεῦ  
εἶναι τὰ κυρίως σημάδια κατὰ μί- εἶναι τὰ κυρίως σημάδια, κατὰ μί-  
μησιν τῶν τῆς μουσικῆς καβαλλίων. μῆσιν τῶν τῆς μουσικῆς καβαλλίων:-

Totam paragraphum rubro colore exaravit P

#### TRANSLATION:

12. "Notice here concerning simple and compound tones, and how the primary signs ought to be in imitation of the Kabbalia of Music."

#### NOTES:

- \* 1. In Thibaut's edition (p.59) this paragraph is printed as a headline to chapter II (= §§13-17). Perhaps it rather reflects a marginal note in the model MS - conceivably covering §§10-11. Another such marginal entry might be §97 which looks like a scholion, cf. also §28.
- \* 2. For κατὰ μίμησιν cf. §10 note 1, where Lavra 1656 is quoted for the expression κατὰ ἀναλογίαν.

IV 13. Τῶν δεκαπέντε τανῶν τόνων P: Τῶν δεκαπέντε τανῶν τόνων  
3v συναριθμουμένων καὶ τῶν τεσσάρων συναριθμουμένων, καὶ τῶν τεσσάρων  
πνευμάτων λεγομένων στοιχείων πνευμάτων λεγομένων στοιχείων  
τῶν δύο φωνηέντων καὶ τῶν δύο τῶν δύο φωνηέντων καὶ τῶν δύο  
5 βαρυνομένων συμπληροῦται ὁ ἑννα- βαρυνομένων· συμπληροῦται ὁ ἑννα-  
καιδέκατος ἀριθμός. οὗτοι δὲ οἱ καιδέκατος ἀριθμός· οὗτοι δὲ οἱ  
δῶδεκα τόνοι ἔχουσι τὴν φύσιν καὶ δῶδεκα τόνοι ἔχουσι τὴν φύσιν καὶ  
τὴν ἐνέργειαν ἀπλήν· οἱ δὲ τρεῖς τὴν ἐνέργειαν ἀπλήν· οἱ δὲ τρεῖς·  
<σύνθετοί εἰσιν,> οἷον τὸ ξηρόν οἷον τὸ ξηρόν  
10 κλάσμα ἀπὸ δύο ὀξεῖων καὶ ἡμιτο- κλάσμα, ἀπὸ δύο ὀξεῖων, καὶ ἡμιτο-  
νίου ἔχει τὴν σύστασιν, τὸ δὲ μέ- νίου ἔχει τὴν σύστασιν· τὸ δὲ μέ-  
γα κράτημα ἀπὸ δύο ὀξεῖων <καὶ πε- γα κράτημα, ἀπὸ δύο ὀξεῖων,  
τασθῆς>, καὶ τὸ κούφισμα ποτέ μὲν καὶ τὸ κούφισμα ποτέ μὲν  
ἀπὸ πετασθῆς ποτέ δὲ ἀπὸ μεγάλου ἀπὸ πετασθῆς, ποτέ δὲ ἀπομεγάλου  
15 κρατήματος. κρατήματος·

1 τανῶν dubitavit Høeg 9 et 12-13 lacunas suppleui 13 κάρισμα ante cor-  
recturam P (correxuit rubricator)

## TRANSLATION:

13. Added together, the fifteen Tonoι and the four Pneumata Stoicheia so-called amount to nineteen. Of these, twelve Tonoι have a simple nature and effect, whereas three are compound - the Xeron Klasma being put together from two Oxeiai and a Hemitonion, the Mega Kratema from two Oxeiai and Petasthe, and the Kouphisma sometimes from Petaste, at other times from Mega Kratema.

## NOTES:

- \* 1. If τανῦν (1) is the genuine text, it is probably a somewhat loose reference to the list which originally was found in §11 (see above, p. 19). Høeg marked the word with a question mark in his transcript of P - feeling, in all likelihood, that it was a dittography of the following word (τόνων).
- \* 2. The terminology used in lines 3-6 reappears in §17, 9-12 and §22,4-6.
- \* 3. Οὗτοι δὲ οἱ δώδεκα τόνοι (6-7) is to be understood as if it were Τοῦτων δὲ οἱ μὲν δώδεκα τόνοι, cf. οἱ δὲ τρεῖς in line 8.
- \* 4. The description of the three compound signs (8-15) fits well to their shapes in Coislin notation, both in composite and incomposite form (  $\text{↯}$  and  $\text{↯}^{\text{↯}}$ ,  $\text{↯}$  and  $\text{↯}^{\text{↯}}$ ,  $\text{↯}$  and  $\text{↯}^{\text{↯}}$  ).
- \* 5. In later terminology the two forms of the Kouphisma are denoted by two terms:  $\text{↯}$  is called πετασθοκούφισμα (or just κούφισμα),  $\text{↯}$  κρατημοκούφισμα (e.g. Tardo p.174, from Vatic. gr. 791; cf. also the list from Paris gr. 261 in Floros III, plate 2). As pointed out by Floros (I,162-65), the Kouphisma does not occur in MSS earlier than those of his types Coislin IV and Chartres III. The 'Kratemokouphisma' is found, though rarely, in both Palæobyzantine notational systems (see e.g. Floros III, Beisp.10 and 91).

14. Εἰσὶ δὲ ἀπὸ τῶν ἀπλῶν τόνων P: εἰσὶ δὲ ἀπὸ τῶν ἀπλῶν τόνων  
 προσλαμβανόμενοι τινες, οἷον αἱ προσλαμβανόμενοι τινές· οἷον αἱ  
 τρεῖς ὀξεῖαι, οἱ δύο ἀπόστροφαι τρεῖς ὀξεῖαι· οἱ δύο ἀπόστροφαι  
 μετὰ ὀξεῖας, αἱ δύο ὀξεῖαι ἀπό- μετὰ ὀξεῖας· αἱ δύο ὀξεῖαι, ἀπό-  
 5 στροφος καὶ πετασθῇ τὸ λεγόμενον στροφος καὶ πετασθῇ τὸ λεγόμενον  
 ἀνάσταμαν (διότι ἀπὸ τοῦ κρατή- ἀνάσταμαν· διότι ἀπὸ τοῦ κρατή-  
 ματος τῆς διπλῆς ἢ πετασθῇ φω- ματος τῆς διπλῆς, ἢ πετασθῇ φω-  
 νὴν ὀξυτέραν φέρουσα ἀναφέρε- νὴν ὀξυτέραν φέρουσαν, ἀναφέρε-  
 ται), καὶ ἕτερα τοῖς ἀριθμη- ται καὶ ἕτερα τοῖς ἀριθμη-  
 10 θεῖσιν ὅμοια· θεῖσιν ὅμοια·

8 φέρουσιν P

## TRANSLATION:

14. A number of combinations are made from the simple Tonoι, e.g. "the three Oxeiai", "two Apostrophoi plus Oxeia", "two Oxeiai, Apostrophos, and Petasthe" (the so-called Anastama - the reason for this name being that the Petasthe is sung at a higher pitch after the prolongation of the Diple), and other groups similar to those already listed.

## NOTES:

- \* 1. The word προσλαμβανόμενοι (*scil.* τόνου?) sounds like a *terminus technicus*. From the examples it is clear that it denotes "fixed neume groups where simple signs are added together". Cf. προσλαμβάνει §15, 4-5.
- \* 2. The three groups which are mentioned as examples are well-known from both Palæobyzantine notational systems. Their Coislin shapes are: ("Dyo" according to the Laura-list, cf. Floros I, 200-01); (in §18, 12-14 this combination is called Apeso Exo, cf. also the Laura-list and Floros I, 214-15); (Anastama, cf. Floros I, 201-03).
- \* 3. 'Ανάσταμαν (for ἀνάσταμα) has several parallels in the following - in §18 alone we find κράτημαν, ἀνατρίχισμαν, ἀνάσταμαν. The phenomenon seems to have been widely spread, and Thibaut (p.59 note 9) is probably not to be trusted when he finds that this ending "trahit une influence arabe; d'où l'on est en droit d'inférer que le codex Hagiopolite provient apparemment de la Palestine ou de l'Égypte".

15. Οἱ δὲ λοιποὶ τῶν ἀπλῶν ἐν- εργοῦνται καὶ μόνοι καὶ μετὰ πνευμάτων, ἄνευ τῆς ἴσης τέν τῇ τῶν τριῶν· οὔτε πνεῦμα προσ-	P: οἱ δὲ λοιποὶ τῶν ἀπλῶν ἐν- εργοῦντων καὶ μόνον καὶ μετὰ 4 <sup>x</sup> πνευμάτων   ἄνευ τῆς ἴσης, ἐν τῇ τῶν τριῶν· οὔτε πνεῦμα προσ-
5 λαμβάνει οὔτε ἕτερον τόνον, ἀλλὰ πανταχοῦ τὴν ἐνέργειαν ἴσιν φέρει. εἰ δὲ καὶ αὐτὴν βουληθῇ τις σύνθετον εἰπεῖν, οὐχ ἁμαρτήσῃ· κεντήματος γὰρ	λαμβάνει, οὔτε ἕτερος τόνος· ἀλλὰ πανταχοῦ τὴν ἐνέργειαν ἴσιν φέρει· εἰ δὲ καὶ αὐτὴν βουληθεὶ τις σύνθετον εἰπεῖν, οὐχ ἁμαρτήσῃ· κεντήματος γὰρ
10 μνήμη μετὰ ὀλίγου ἀποτελεῖται ἡ ἴση. εἰ δὲ τις ἀπορεῖ τοῦτο, εἰ ἔστιν ἄσματικὸς τῆς πρώτης λαμβάνέτω τὴν πληροφορίαν, ὅτι ἐν τοῖς χειρονομήμασι τοῖς	μνήμη μετὰ ὀλίγου ἀποτελεῖται ἡ ἴση· εἰ δὲ τις ἀπορεῖ τοῦτο, εἰ ἔστιν ἄσματικὸς, τῆς πρώτης λαμβάνέτω τὴν πληροφορίαν· ὅτι ἐν τοῖς χειρονομήμασι τοῖς
15 ἄσματικοῖς τὸ ὀλίγον ἴσον κέ- κληται.	ἄσματικοῖς· τὸ ὀλίγον ἴσον κέ- κληται.

1-2 ἐνεργοῦντων P    2 μόνον P    5 ἕτερος τόνος P    10 an μνήμην 'legendum?

## TRANSLATION:

15. But the rest of the simple tones function both alone and together with Pneumata, apart from the Ison which is neither combined with a Pneuma nor with another Tonos, but in all situations has only its function of Ison (?). If somebody wants to call this sign a compound one, this would not be wrong; for the Ison is written as Kentema + Oligon. And if he has his doubts about ..., let him know that in the asmatic lists of signs (?) the Oligon is called Ison.

## NOTES:

- \* 1. Thibaut (p.59, note 5) suggests that ἐν τῇ τῶν τριῶν in 3-4 is an elliptical expression for ἐν τῇ τῶν τριῶν σημαδίων χειρονομία, a reference to the three fundamental signs of direction (Ison for ἰσότης, Oligon for ἀνάβασις, Apostrophos for κατὰβασις - to use the terminology of the Papadike). As subject for προσλαμβάνει he adds ἡ ὕψη, before the first οὔτε in line 3. Perhaps the text should rather be restored as follows: ἀνευ τῆς ὕψης, <ἥτις> ἐν τῇ τῶν τριῶν < > οὔτε πνεῦμα προσλαμβάνει οὔτε ἕτερον τόνον...
- \* 2. Lines 9-11 describe a Coislin Ison of the same type as e.g. Sinai 1242 (Strunk, Specimina, plate 160), whereas the reference in 15-16 is clearly to the straight Chartres Ison (—).
- \* 3. Provisionally I interpret τὰ χειρονομήματα τὰ ἀσματικά (14-15) as a term for "musical notation used in MSS of ᾄσμα"; a related term occurs in the heading of the Laura-list (Σὺν θεῷ, ἀρχαὶ τῶν μελοδημάτων)

16. Ἔστι δὲ καὶ ἡ λεγομένη φθορά, ἡ ἀπὸ τοῦ κεντήματος καὶ τῆς ὑψηλῆς ἔχουσα τὴν ἀπό- ρροϊαν· καὶ γὰρ οὐδ' αὐτὴ μόνη	P: ἔστι δὲ καὶ ἡ λεγομένη φθορᾶ, ἡ ἀπὸ τοῦ κεντήματος καὶ τῆς ὑψηλῆς, ἔχουσα τὴν ἀπό- ρροϊαν· καὶ γὰρ οὐδ' αὐτὴ μόνη
5 ἐνεργεῖ, ἀλλὰ μετὰ ὀξείας· ἡ δὲ καὶ δύο ἥ καὶ τριῶν ὀξειῶν ἥ καὶ δύο ἀποστρόφων καὶ ὀξείας ἀποτελεῖ κεντήματος δύναμιν· ὅτε δὲ ἐπάνω, πληροῦ δύναμιν	ἐνεργεῖ· ἀλλὰ μετὰ ὀξείας· ἡ δὲ καὶ δύο ἥ καὶ τριῶν ὀξειῶν, ἥ καὶ δύο ἀποστρόφων καὶ ὀξείας, ἀποτελεῖ κεντήματος δύναμιν· ὅτε δὲ ἐπάνω πληροῦ δύναμιν
10 ὑψηλῆς, εἰ καὶ μὴ δι' ὄλου.	ὑψηλῆς, εἰ καὶ μὴ δι' ὄλου·
1 ἔστι] ἔτι Floros    5 ἡ] ἡ Floros	

## TRANSLATION:

16. There is also the so-called Phthora, derived (graphically?) from the Kentema and the Hypsele. This sign, too, is not used alone, but combined with Oxeia. But in the combinations with two or three Oxeiai or with two Apostrophoi + Oxeia, it has the effect of a Kentema; but when it is placed on top (of the group), it functions as a Hypsele, though not always.

## NOTES:

- \* 1. The ἀπόρροια in 3-4 (already encountered in §10,8) perhaps refers to the graphical "derivation" of the Phthora, rather than to its function - though the idea of comparing its two elements ( ◦ and | or / ) to Kentema and Hypsele seems rather farfetched. The author may have suffered from a *Systemzwang*, cf. his equally strange description of Ison in §15,9-11. His start-ing-point seems to have been the clear cases of σύνθετοι τόνοι (§13,8-15). Floros (I,296) uses "Ausgang" to render ἀπόρροια.
- \* 2. In 5-10 he evidently refers to groups such as // ϕ // ϕ and >> / ϕ (cf. Floros I,297). According to Floros, the combination of Diple and Phi is not to be found in his material.

- \* 3. In later terminology, ἐπάνω is opposed to ἔμπροσθεν (see e.g. Tardo p. 171, from Vatic. gr. 872). Our author apparently distinguished between *π* and *φ* etc.

17. Ἐπεὶ δὲ εἵπομεν περὶ τόνων, P: ἐπεὶ δὲ εἵπομεν περιτόνων,  
 φέρε εἵπομεν καὶ περὶ πνευμάτων, φέρε εἵπομεν καὶ περιπνευμάτων,  
 τίνος χάριν ἐγένοντο, ὅτι ὥσπερ τίνος χάριν ἐγένοντο· ὅτι ὥσπερ  
 τὸ σῶμα πολλά ἔχον τὰ μέλη· ἀν- τὸ σῶμα πολλά ἔχον τὰ μέλη· ἀν-  
 5 ἐνέργητά εἰσιν εἰ μὴ διὰ τῶν ἐνέργητα εἰσιν, εἰ μὴ διὰ τῶν  
 στοιχείων ἐνεργοῦνται, οὕτω καὶ στοιχείων ἐνεργοῦνται, οὕτω καὶ  
 οἱ τόνοι εἰς μέλη πολλά σωματο- 4<sup>V</sup> οἱ τόνοι εἰς μέλη πολλά σωματο-  
 ποιηθῆναι θέλουσιν, ὅτε μέλλ- ποιηθῆναι θέλουσιν ὅτε μέλλ-  
 ουσιν ἐνεργεῖν. ἐν οἷς ἐπενοή- ουσιν ἐνεργεῖν· ἐν οἷς ἐπενοή-  
 10 θησαν ταῦτα τὰ στοιχεῖα, ὧν τὰ θησαν ταῦτα τὰ στοιχεῖα· ὧν τα-  
 μὲν δύο φωνητικά, τὰ δὲ δύο μὲν δύο φωνητικά, τὰ δὲ δύο  
 βαρυνόμενα, ἔν· ἐν τούτοις <ἐν- βαρυνόμενα· ἔν· ἐν τούτοις ἐν-  
 εργῶσιν.> ἐνεργοῦσι μὲν καὶ εργοῦσι μὲν καὶ αὐτὰ· πλήν  
 αὐτὰ· πλήν νεκρά ἐστὶν ἡ τούτων νεκρά ἐστὶν ἡ τούτων ἐνέργεια·-  
 15 ἐνέργεια.

12-13 ἐνεργῶσιν suppleuit Ebbesen

#### TRANSLATION:

17. Having now spoken about the Tonoι, let us also tell for what purpose the Pneumata have been introduced: Our body has many limbs (μέλη), but if these are not activated by means of the elements (στοιχεῖα), they remain inactive. In a similar way, the Tonoι require to become a body of many musical phrases (μέλη), if they are to activate (i.e. to produce sounds). In this connection these signs (στοιχεῖα) have been invented - two of them to indicate high pitch, the other two to indicate low pitch - in order that they (the Tonoι) <may activate> by means of these (the Pneumata). Certainly, they (the Pneumata) are also activating in themselves; but their activity is "dead".

#### NOTES:

- \* 1. The syntax in 3-6 is somewhat loose, but there is no need to correct.  
 \* 2. Ἐνεργεῖν in its transitive sense seems to denote the realization of the potential sound as implied in the neumatic sign.

- V 18. Ἰστέον ὅτι ἡ ὀξεῖα μόνη ἐν- P: Ἰστέον ὅτι ἡ ὀξεῖα μόνη ἐν-  
 ἐργειαν φέρει, ὁμοίως καὶ τὰ ἐργειαν φέρει· ὁμοίως καὶ τὰ  
 πνεύματα· πάλιν δέ, διπλασιαζό- πνεύματα· πάλιν δὲ διπλασιαζό-  
 μένα καὶ διπλή καλούμενα ἀπο- μένα καὶ διπλή καλούμενα, ἀπο-

5 τελεῖ κράτημαν. ὁμοίως καὶ ἡ  
 ἀπόστ<sup>2</sup>ροφος ἐνεργεῖ· διπλασιαζο-  
 μέν<sup>2</sup>η γάρ τὸ αὐτὸ ἀποτελεῖ. καὶ  
 πάλιν ἡ ὀξεῖα προσλαμβανομένη  
 ἐτέραν ὀξεῖαν καὶ τὸ ἡμίτονον  
 10 ἡ τὸ κλάσμα· τριπλασιαζομένων  
 δὲ καὶ μετὰ ἀποστρόφου ἐνός,  
 λέγεται ἀπέσω ἔξω. ὁμοίως καὶ  
 οἱ δύο ἀπόστροφοι μετὰ ὀξεῖας  
 τὸ αὐτὸ λέγονται. πάλιν αἱ τρεῖς  
 15 ὀξεῖαι μετὰ κεντημάτων δύο ἀπο-  
 τελοῦσιν ἀνατρίχισμαν, καὶ ἐν-  
 ειλητικὸν ἀνάσταμαν· ὅπερ καὶ  
 αὐτὸ μετὰ διπλῆς ὀξεῖας καὶ  
 πετασθῆς ἀποστρόφου καὶ δύο  
 20 κεντημάτων συνίσταται· ταῦτα δὲ  
 ὀπίσω καὶ ἔμπροσθεν φωνὴν δι-  
 5r ορίζουσι. πάλιν οἱ δύο ἀπό-  
 στροφοι μετὰ δύο ὀξεῖων καὶ  
 δύο κεντημάτων, εἴτε ἄνω εἰσὶν  
 25 εἴτε κάτω, καὶ αὐτοὶ ἀνατρί-  
 χισμαν λέγονται· εἰ δὲ ἡ ἴση  
 φέρει ἀπόστροφον, εἴτε ἄνω εἴτε  
 κάτω, βαρεῖα λέγεται· εἰ δὲ  
 ἔχει δύο κεντήματα, λέγεται  
 30 σεῦσμα· εὐρήσεις δὲ τοῦτο ὡς  
 ἐπὶ τὸ πλεῖστον ἐν τῇ ἀρχῇ τῶν  
 εἰρμῶν τοῦ πλαγίου δευτέρου.  
 τὸ ὀλίγον δὲ μετὰ ἀποστρόφου,  
 κᾶντε ἄνω κᾶντε κάτω ἢ εἰς τὸ  
 35 πλάγιον, καὶ αὐτὸ βαρεῖα λέγε-  
 ται. οἱ δύο ἀπόστροφοι διάλοξοι  
 καὶ αὐτοὶ βαρεῖα λέγεται· ὁμοί-  
 ως καὶ οἱ τέσσαρες.























τελεῖ κράτημαν· ὁμοίως καὶ ἡ  
 ἀπόστ<sup>2</sup>ροφος ἐνεργεῖ· διπλασιαζο-  
 μέν<sup>2</sup>η γάρ, τὸ αὐτὸ ἀποτελεῖ. καὶ  
 πάλιν ἡ ὀξεῖα προσλαμβανομένη  
 ἐτέραν ὀξεῖαν· καὶ τὸ ἡμίτονον  
 ἡ τὸ κλάσμα· τριπλασιαζομένων  
 δὲ καὶ μετὰ ἀποστρόφου ἐνός,  
 λέγεται ἀπέσω ἔξω· ὁμοίως καὶ  
 οἱ δύο ἀπόστροφοι μετὰ ὀξεῖας,  
 τὸ αὐτὸ λέγονται· πάλιν αἱ τρεῖς  
 ὀξεῖαι μετὰ κεντημάτων δύο, ἀπο-  
 τελοῦσιν ἀνατρίχισμαν· καὶ ἐν-  
 ειλητικὸν ἀνάσταμαν· ὅπερ καὶ  
 αὐτὸ μετὰ διπλῆς ὀξεῖας καὶ  
 πετασθῆς ἀποστρόφου καὶ δύο  
 κεντημάτων συνίσταται· ταῦτα δὲ  
 5r ὀπίσω καὶ ἔμπροσθεν, φωνὴν δι-  
 ορίζουσι· πάλιν οἱ δύο ἀπό-  
 στροφοι μετὰ δύο ὀξεῖων καὶ  
 δύο κεντημάτων, εἴτε ἄνω εἰσὶν  
 εἴτε κάτω, καὶ αὐτοὶ ἀνατρί-  
 χισμαν λέγονται· εἰ δὲ ἡ ἴση  
 φέρει ἀπόστροφον· εἴτε ἄνω εἴτε  
 κάτω, βαρεῖα λέγεται· εἰ δὲ  
 ἔχει δύο κεντήματα λέγεται  
 σεῦσμα· εὐρήσεις δὲ τοῦτο ὡς  
 ἐπὶ τὸ πλεῖστον ἐν τῇ ἀρχῇ τῶν  
 εἰρμῶν τοῦ πλαγίου δευτέρου·  
 τὸ ὀλίγον δὲ μετὰ ἀποστρόφου  
 κᾶντε ἄνω κᾶντε κάτω, ἢ εἰς τὸ  
 πλάγιον, καὶ αὐτὸ βαρεῖα λέγε-  
 ται· οἱ δύο ἀπόστροφοι διάλοξοι,  
 καὶ αὐτοὶ βαρεῖα λέγεται· ὁμοί-  
 ως καὶ οἱ τέσσαρες·

1, 4, 6, 7 notas musicas rubro colore scripsit P 7 κράτημαν post  
 ἀποτελεῖ. addidit Thibaut 16-17 εὐειλητικον legit Thibaut, quem  
 secutus est Høeg (εὐειλ.)

## TRANSLATION:

18. NB. In single position, the Oxeia ( / ) is an activating sign, as are the Pneumata. But when it is written twice and is called Diple ( // ), its effect is (only) a lengthening. The Apostrophos ( > ) behaves in a similar way; for when it is written twice ( >> ), its effect is the same (i.e. a lengthening). Also the Oxeia, when combined with another Oxeia and the Hemitonon or Klasma. But when there are three Oxeiai plus one Apostrophos, this is called Apeso Exo. The two Apostrophoi plus Oxeia are also called by this name (i.e. Apeso Exo). The three Oxeiai plus two Kentemata constitute Anatrachisma and "eneiletic" (or "eueiletic", see Notes) Anastama. The same (i.e. Anastama?) is also formed by means of Double Oxeia and Pestathe, Apostrophos, and two Kentemata. These (i.e. the Dyo Kentemata) define (the size of) the interval, (depending on whether they are put) after or before. The two Apostrophoi plus two Oxeiai and two Kentemata - whether these are above or below - are also called Anatrachisma. And if the Ison carries an Apostrophos - above or below - it is called Bareia. But if the Ison has two Kentemata, this is called Seisma; this will mostly be found at the beginning of Heirmoi in Plagios Deuterios. Oligon plus Apostrophos - whether above or below or sideways - is also called Bareia. The two slanting Apostrophoi are also called Bareia; so are the four.

## NOTES:

- \* 1. From line 7 onwards there are no interlinear red neumes to support the description of the configurations. It is hard to tell whether or not an earlier stage of the text comprised such clarifications. There are no interlinear neumes in the corresponding passages, §§13-14; but on the other hand, details in §11 suggest that some symbols of notation have been dropped during the process of transmission (cf. note 4 ad §11).
- \* 2. The descriptions in 7 sqq. cover the following groups of neumes: 7-10: , i.e. the Xeron Klasma (cf. §13). 10-14:  and , two forms of Apeso Exo; the former of these is rarely found, but see e.g. Vatop. 1488,169r. 14-22:  (or ) and , Anatrachisma and/or Anastama (Floros I,201-04). 22-26:  (?), Floros's "Anatrachisma IIB" (ibid.216). 26-38: Various groups which are called Bareia. None of them, however, actually contain the Bareia neume itself:  or ,  (which is called Seisma in 28-30; the standard opening of Second Plagal Heirmoi referred to, however, is the group . See below, note 3),  or  or , . Finally, a Bareia consisting of four Apostrophoi is mentioned. For this group, see note 3 below.
- \* 3. Of the constellations listed in note 2, six are to be found in the Heirmologion Lavra Γ 9: , , and  are frequent;  (10r line 15),  (21v line 12),  (87v) - all of them corresponding to groups with  in other MSS. This observation should be used to settle a *terminus post quem* for §18; for this "Seisma" seems to be found mostly in MSS of Floros's Coislin VI. See Floros I,354-5 on the spread of Coislin VI from Constantinople shortly before 1100.
- \* 4. What is an ἐνελεητικόν (or εὐελεητικόν) ἀνάστημα?
- \* 5. On the position of the Dyo Kentemata (20-22), cf. Floros I,204 on the pair *Strēla svētlaja* and *Strēla mračnaja*.

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19. Ἐκ τούτου οὖν δείκνυται, P: ἐκ τούτου οὖν δείκνυται,  
ὅτι δύνатаί τις διὰ τῶν αὐτῶν ὅτι δύνатаί τις διὰ τῶν αὐτῶν

τόνων μὴ παρόντων τῶν πνευμάτων  
 συντιθέναι μέλη· οὐχ οὕτως δὲ  
 5 ὥς εἰ μετὰ τῶν πνευμάτων.

τόνων μὴ παρόντων τῶν πνευμάτων,  
 συντιθέναι μέλη· οὐχ'οὕτως δὲ  
 ὥς εἰ μετὰ τῶν πνευμάτων.

# TRANSLATION:

19. As you can see from this, it is possible to express melodies by means of the Tonoι themselves, without Pneumata - though not in the same way as when these are included.

# NOTES:

- \* 1. Συντιθέναι is probably "to write down" rather than "to compose". Μέλη is either "melodies" or, more specifically, "melodic phrases". In the latter case, we might infer from ἐκ τούτου that the configurations in §18 were considered to be "μέλη" by the author of §19. (For the use of the term in theoretical texts, see Floros I,113-14).
- \* 2. Short though it is, §19 is quite enigmatic. Its "message" seems to be that Pneumata are useful elements of the notation, though not absolutely necessary. But is this, really, a reasonable conclusion to draw from the data in §18? Or, to put it differently: Is §18 a natural statement to write as a background for the conclusion in §19? The Pneumata were introduced as a theme in §17, the question being τίλος χάριν ἐγένοντο. This question got its answer already at the end of §17, and the section on the Pneumata might have ended there. Besides, the ὅστεον of §18 suggests a fresh start, cf. §4 and §24. It would be more easy to understand §19 in terms of a later intrusion into the text, a scholion added to §18 at a time when Coislin notation had already been superseded by diastematic neumes. For whereas it would not be relevant to point out, in a Coislin context, that the μέλη in §18 are understandable without Pneumata, a remark of this kind would be more natural for a later "teacher", addressing himself to pupils who know about diastematic, "Round" notation. Tentatively, I therefore ascribe §19 to a later layer of the traditions embodied in the Paris MS.

20. Διαφέρει δὲ ἡ ὀξεῖα τῆς  
 πετασθῆς ὥς πλείονα ἐχούσης  
 τὴν δύναμιν. ὅτε δὲ ἀμφοτέρα  
 ἐπάνω ἔχουσι τὰ πνεύματα, δια-  
 5 φορὰ οὐκ ἔστιν ἐν αὐτοῖς· ἐκ-  
 τὸς δὲ τῶν πνευμάτων, δυνατω-  
 τέρα ἐστὶν ἡ πετασθῆ τῆς ὀξεῖας.  
 ἰσοδυναμεῖ δὲ τῇ ὀξεῖα τὸ ὀ-  
 λίγον, εἰ καὶ ἀμφοτέρα μετὰ  
 10 τῶν δύο κεντημάτων.

P: διαφέρει δὲ ἡ ὀξεῖα τῆς  
 πετασθῆς· ὥς πλείονα ἐχούσης  
 τὴν δύναμιν ὅτε δὲ ἀμφοτέρα  
 ἐπάνω ἔχουσι τὰ πνεύματα· δια-  
 φορὰ οὐκ ἔστιν ἐν αὐτοῖς· ἐκ-  
 τὸς δὲ τῶν πνευμάτων, δυνατω-  
 τέρα ἐστὶν ἡ πετασθῆ τῆς ὀξεῖας·  
 5v ἰσοδυναμεῖ δὲ τῇ ὀξεῖα τὸ ὀ-  
 λίγον, εἰ καὶ ἀμφοτέρα· μετὰ  
 τῶν δύο κεντημάτων·

9 καὶ fortasse corruptum; an κεῖται legendum?

## TRANSLATION:

20. Oxeia differs from Petasthe, the latter being more dynamic. However, when these two signs have Pneumata on top of them, there is no difference between them; but without Pneumata, Petasthe is more dynamic than Oxeia. The Oligon is dynamically equal to the Oxeia, when they occur together with Dyo Kentemata.

## NOTES:

- \* 1. If καὶ (9) is not to be corrected into κεῖται (or κεῖνται?), it is probably not to be combined with εἰ - and καὶ ἀμφοτέρω should then be taken to be an equivalent to καὶ τὰ δύο (= both, apparently a "Balkanism" - cf. e.g. Bulgarian и двамата).
- \* 2. It may be reasonable to state that there is no dynamic difference between the combinations  $\leq$  and  $\nearrow$  (8-10). But the postulated disappearance of the dynamic distinction between Oxeia and Petasthe *when these are combined with Pneumata* is strange. Notice also that the same information is given twice (in 2-3 and 6-7). Could it be that 3-7 belongs to the same late layer as §19?

21. Τόνοι δὲ τοῦ ᾄσματος εἰσὶν	P: τόνοι δὲ τοῦ ᾄσματος, εἰσὶν
οὗτοι· ἰσότης, ὀλίγον, μετ'	οὗτου· ἰσότης· ὀλίγον μετ'
ὀλίγον, μέσον, ὑπέρμεσον, ἄκρον	ὀλίγον· μέσον· ὑπέρμεσον· ἄκρον
καὶ τέλειον· κατὰ δὲ τὴν < ἰ-	καὶ τέλειον· κατὰ δὲ τὴν
5 στορίαν?> ὕστερον ἐπηυξύνθησαν	ὕστερον ἐπαυξυνθεῖσαν
< εἰς ιε' ?> παρὰ τῶν ἱκανῶς	παρὰ τῶν ἱκανῶς
τὴν αὐτῶν ἀκριβωσαμένων δύναμιν.	τὴν αὐτῶν ἀκριβωσαμένην δύναμιν,
5 ἐπαυξυνθεῖσαν P	4-6 emendavi ut potui 7 ἀκριβωσαμένην Thibaut

## TRANSLATION:

21. The Tonoι of Ancient Music are the following: Ison, Oligon, Metoligon, Meson, Hypermeson, Akron, and Teleion. According to tradition, their number was later-on increased to fifteen "by those who sufficiently understood their function".

## NOTES:

- \* 1. The names of the seven strings look like a mixture of Byzantine and Ancient terms. In §102 the traditional names are given. One of these occur at both places, the Hypermeson or Hypernese; this term, according to Vincent p. 270 note 2, is a speciality of Nicomachos's for the usual Lichanos. The beginning of the Lavra-list may reflect a similar tradition, with its counting of seven φωναί (numbered α-ζ) and the term τελεῖα for the uppermost of these.
- \* 2. The text of the Paris MS is undoubtedly corrupt in 4 sqq. My "emendation" is meant as a suggestion, only. I take the reading ἐπαυξυνθεῖσαν to be a conjecture which was introduced after one or more words had fallen out.

- \* 3. The precise meaning of the latter part of this paragraph escapes my understanding. The first lines evidently refer to the seven-stringed "Organon" (cf. §103), consequently ἄσμα must be Ancient Music. The neumes of the Church do not occur until §22, consequently lines 4 sqq. must describe a later development within the Ancient tradition - in all likelihood the formation of τὸ τέλειον σύστημα. Evidently, then, something has fallen out during the transmission of the text, referred to by αὐτῶν (7). But why are the inventors of the system described in this curious way?

22. Τοσαῦτα καὶ αἱ τῶν φωνῶν ιδιότητες τῶν ἐν ἐκκλησίᾳ παρα- δομένων προσάδεσθαι τῷ Θεῷ εἰσὶν, οἱ δεκαεννέα ποσούμενοι	P: τῶσαῦτα καὶ αἱ τῶν φωνῶν ιδιότητες τῶν ἐν ἐκκλησίᾳ παρα- δομένων προσάδεσθαι τῷ Θεῷ εἰσὶν οἱ δεκαεννέα ποσούμενοι
5 μετὰ τῶν τεσσάρων πνευμάτων καὶ στοιχείων λεγομένων ὧν καὶ τὰ ὀνόματά εἰσι ταῦτα Ἰσον, ὀ- λίγον, ὀξεῖα, πετασθή, κούφισμα, βαρεῖα, ἀπόστροφος, κατάβασμα,	μετὰ τῶν τεσσάρων πνευμάτων καὶ στοιχ[ε]ῶν λεγομένων ὧν καὶ τὰ ὀνόματα εἰσὶ ταῦτα Ἰσον ὀ- λίγον ὀξεῖα πετασθή κούφισμα βαρεῖα ἀπόστροφος κατάβασμα
10 κύλισμα, ἀνατρίχισμα, ἀπόδερ- μα, ἀντικένωμα, ξηρόν κλάσμα, κράτημα, σύρμα. σὺν αὐτοῖς τὰ τέσσαρα πνεύματα κέντημα, ὑψ- ηλή, χαμηλὸν καὶ ἐλαφρόν. ὁμοῦ	κύλισμα ἀνατρίχισμα ἀπόδερ- μα ἀντικένωμα ξηρόν κλάσμα κρατήμα σύρμα σὺν αὐτοῖς τὰ τέσσαρα πνεύματα κέντημα ὑψ- ηλή χαμηλὸν καὶ ἐλαφρόν ὁμοῦ
15 δεκαεννέα καὶ ἡμίτονα τρία σεῖσμα, κλάσμα μικρόν καὶ παρα- κλητικὴ.	δεκαέννέα καὶ ἡμίτονα τρία σεῖσμα κλάσμα μικρόν, καὶ παρα- κλητικὴ.

1 an tosaŷtai legendum ?

#### TRANSLATION:

22. So many (i.e. 15) are also the distinct properties of the sounds which in the tradition of the Church are sung in God's honour - reckoned to nineteen if the four Pneumata are included, the so-called Stoicheiai. Their names are: Ison, Oligon, Oxeia, Petasthe, Kouphisma, Bareia, Apostrophos, Katabasma, Kylisma, Anatrighisma, Apoderma, Antikenoma, Xeron Klasma, Kratema, and Syrma. Together with these are reckoned the four Pneumata: Kentema, Hypsele, Chamelon, and Elaphron. Nineteen in all, plus three Hemitona: Seisma, Klasma Mikron, and Parakletike.

#### NOTES:

- \* 1. In lines 1-6, the author has attempted to describe the Byzantine neumes in refined words, instead of sticking to the σημάδια of §12 or the τόνοι of §§13,17 etc. The result is somewhat confusing - e.g. the use of masculine forms in 4 (maybe influenced by a non-expressed τόνος?) or the construction with infinitive in 2-3. His "terminology" has a philosophical

ring (αἱ τῶν φωνῶν ἰδιότητες in 1-2); this may be the reason why it is so difficult to grasp the exact meaning of αἱ φωναί ("intervals" or "sounds" or "melodies"?). His choice of the verb προσῄδεσθαι (3) might perhaps be explained from the obvious similarity of the neumes and the grammatical signs of προσωδία.

- \* 2. The list (7-12) is discussed by Floros (Neumenkunde I, 113-7 and III, 36). Its connection with §§10-13 is evident. But one small detail should be noticed: §22 uses the term κράτημα (12), whereas the original list in §11 seems to have had μέγα κράτημα (cf. §13!). In his table (III, 36) Floros silently corrects §22 into Mega Kratema - but the small difference in terminology may betray that the two lists were not identical, though the magic number of fifteen was the same.

23. Ταῦτα ὁρθῶς εἴ τις ἐπισκοπήσει, ἐρεῖ ἐκ τῶν τῆς μουσικῆς τόνων ἐπενοήθησαν καὶ οἱ τῶν μελωδῶν τόνοι. ληρεῖν ἐόικασιν	P: ταῦτα ὁρθῶς εἴ τις ἐπισκοπήσει· ἐρεῖ ἐκ τῶν τῆς μουσικῆς τόνων, ἐπενοήθησαν καὶ οἱ τῶν μελωδῶν τόνοι, ληρεῖν ἐόικασιν
5 οἱ τὰ τῶν γραμματικῶν συλῶντες θεωρήματα καὶ τοῖς τόνοις ἐπιτιθέντες· ὥς οἱ γραμματικοὶ κατὰ μίμησιν τῶν κδ ὥρων τῆς νυχθημέρου ἔχειν φασὶν τὰ κδ	οἱ τὰ τῶν γραμματικῶν συλῶντες θεωρήματα, καὶ τοῖς πόνους ἐπιτιθέντες· ὥς οἱ γραμματικοὶ κατὰ μίμησιν τῶν κδ ὁρῶν τῆς νυχθημέρου ἔχειν· φασὶν τὰ κδ
10 γράμματα, οὕτω δὴ καὶ οὗτοι τοὺς κδ τόνους· καὶ ὥς ἐκεῖνοι κατὰ μίμησιν τῶν ζ πλανητῶν ἔχειν τὰ ζ φωνήεντα, οὕτω δὴ καὶ οὗτοι τὰ ζ αὐτῶν φωνή-	γράμματα, οὕτω δὴ καὶ οὗτοι, τοὺς κδ τόνους· καὶ ὥς ἐκεῖνοι κατὰ μίμησιν τῶν ζ πλανητῶν· ἔχει τὰ ζ φωνήεντα· οὕτω δὴ καὶ οὗτοι τὰ ζ αὐτῶν φωνή-
15 εντα, καὶ ἕτερα τινά.	εντα καὶ ἕτερα τινά:—

6 τόνους Thibaut πόνους P

13 ἔχει P, sed confer lin 9

#### TRANSLATION:

23. If you reflect properly on these facts, you will admit that the Tonoι of the melodies have been invented from the Tonoι of Ancient music. Apparently it is pure nonsense to steal the theories of the grammarians - as some do - and apply these to the Tonoι: In the same way as the grammarians say that their 24 letters are an imitation of the 24 hours of the night-and-day, these persons interpret the 24 Tonoι. And just as the former declare that the seven vowels (φωνήεντα) imitate the seven planets, the latter explain their seven sounds (φωνήεντα). And there is more of the same kind.

#### NOTES:

- \* 1. The juxtaposition of the Ancient and Ecclesiastical musical notation (1-4) occurred already in §§10 and 22-23. Notice the changing terminology,

a phenomenon which can be explained in more than one way (e.g. stylistically, or being due to different sources).

- \* 2. Thibaut's silent correction of P's πόνους (6) is as good as it is small. It cannot be totally excluded, however, that the MS reading is sound; τοῖς πόνους ἐπιτιθέντες might convey the idea that these theoreticians of music transferred such numeric speculations from grammatical treatises "to their own products". In favour of this interpretation one may point out that both πόνους and συλῶντες are emotionally loaded words. music transferred such numeric speculations from grammatical treatises "to their own products". In favour of this interpretation one may point out that both πόνους and συλῶντες are emotionally loaded words.

- |   |  |
|---|--|
| <p>VI 24. Ἰστέον ὥς ἡ ἴση φωνὴν οὐκ<br/>ἔχει, οὔτε ἀνιοῦσαν οὔτε κατ-<br/>ιοῦσαν, ἀλλ' ἔστι τοῖς τόνους<br/>ἅπασι ταπεινουμένη ὅπου δ' ἂν</p> <p>5 εὐρεθῇ, κἄντε εἰς ὀξύτητα φωνῆς<br/>κἄντε εἰς χαμηλότητα· καὶ ὑπο-<br/>τάσσει καὶ ὑποτάσσεται.</p> <p>7 καὶ οὐχ ὑποτάσσεται coniecit T</p> | <p>P: Ἰστέον ὥς ἡ ἴση φωνὴν οὐκ<br/>ἔχει, οὔτε ἀνιοῦ[σ]αν, οὔτε κατ-<br/>ιοῦσαν· ἀλλ' ἔστι τοῖς τόνους<br/>ἅπασι ταπεινουμένη, ὅπου δ' ἂν</p> <p>εὐρεθῇ· κἄντε εἰς ὀξύτητα φωνῆς,<br/>κἄντε εἰς χαμηλότητα· καὶ ὑπο-<br/>τάσσει καὶ ὑποτάσσεται.</p> |
|---|--|

#### TRANSLATION:

24. NB. The Ise has no interval value (φωνή), neither ascending nor descending, but wherever it is to be found - whether in high or in low pitch - it humbly follows any (preceding) note. It subordinates, and it is subordinated.

#### NOTES:

- \* 1. The curious expression in 3-4 about the Ison as being τοῖς τόνους ἅπασι ταπεινουμένη must refer to its function of sign for repetition of pitch. A related text (Tardo p.170,13-19) expresses this more clearly: 'Ἡ ἴση... ἔστιν τοῖς ἅπασι τόνους ἀκόλουθος καὶ ἰσότητα φέρουσα τῆς τοῦμπάλιν ἐρχομένης φωνῆς (i.e. the immediately preceding note)... ἔξ οὗ καὶ τὴν ἐπωνυμίαν ἔσχημεν (read: ἔσχηκεν)· ἦτ' ἂν γὰρ εἰς ὀξύτητα φωνῆς εὐρεθῇ ἦτ' ἂν χαμηλότητα, ἐκεῖνων δέχεται (i.e. δέχεται) τὴν φωνήν.
- \* 2. For ὅπου δ' ἂν (or ὀπουδάν) see Sophocles s.v. and D. Tabachovitz, *Études sur le grec de la basse époque*. Uppsala 1943, pp.26-29.
- \* 3. The last statement in this short paragraph has caused much trouble to subsequent generations of teachers. We find a curious demonstration of this in the Erotapokriseis of Lavra 1656 (Tardo 218,23-219,22) where the ὑποτάσσεται-notion is dismissed as being utterly silly. In a way, however, the Hagiopolites makes good sense: When combined with other neumes, the Ison certainly subordinates (in so far as it annuls the interval value of the other neume); but it is also subordinated (in so far as its φωνή is produced with the dynamic quality of the other neume). But admittedly, the lapidary phrasing of our text seems to demand to be orally elaborated by a teacher!

25. τὸ δὲ ὀλίγον ἔχει φωνήν  
 μίαν, ὁμοίως καὶ ἡ πετασθὴ καὶ  
 ἡ ὀξεία. ἀποροῦσι δὲ τινες, τί  
 δῆποτε οὐχ' ἐν ἐτέθῃ σημάδιον  
 5 ἔχον μίαν φωνήν, ἀλλὰ τρία ἔ-  
 χοντα ἀνὰ μίαν φωνήν, καίτοι  
 τὸ ἐν ἤρκει <ἀν> ἀντὶ μιᾶς φω-  
 νῆς πανταχοῦ. πρὸς οὓς λέγομεν,  
 10 ὅτι διαφοραὶ εἰσι φωνῶν· ἡ μὲν  
 οὕτως. ἔνεκεν τῆς φωνῶν δια-  
 φοραῖς ἐτέθησαν καὶ διάφορα ση-  
 μάδια· οὐ μόνον δὲ διὰ τοῦτο,  
 ἀλλὰ καὶ διὰ τὴν ἐναλλαγὴν τῆς  
 15 χειρονομίας.

P: τὸ δὲ ὀλίγον ἔχει φωνήν  
 μίαν, ὁμοίως καὶ ἡ πετασθὴ καὶ  
 ἡ ὀξεία· ἀποροῦσι δὲ τινες, τί  
 δῆποτε οὐχ' ἐν ἐτέθῃ σημάδιον  
 ἔχον μίαν φωνήν, ἀλλὰ τρία ἔ-  
 χοντα, ἀνὰ μίαν φωνήν· καίτοι  
 τὸ ἐν ἤρκει ἀντὶ μι[α]ς φω-  
 νῆς πα[ν]ταχοῦ· πρὸς οὓς λέγομεν·  
 6ν | ὅτι διαφοραὶ εἰσὶ φωνῶν· ἡ μὲν·  
 ὀξεία· ἡ δὲ· ὁμαλή· ἡ μέσον  
 τούτων· ἔνεκεν τῆς φωνῶν δια-  
 φοραῖς, ἐτέθησαν, καὶ διάφορα ση-  
 μάδια· οὐ μόνον δὲ διατοῦτο·  
 ἀλλὰ καὶ διὰ τὴν ἐναλλαγὴν τῆς  
 χειρονομίας·

7 ἤρκα Thibaut ἄν suppleui 8 παχοῦ Perne, πα[ν]ταχοῦ Hæeg,  
 πα[ρε]σχ[εῖν] Thibaut 9 haud dubie corruptus varie emendari pot-  
 est, e.g. ἡ μὲν ὀξεῖα, < ἡ δὲ.....>, ἡ δὲ ὁμαλή ἢ (vel ἡ) μέσον τού-  
 των, vel ἡ μὲν ὀξεῖα, ἡ δὲ ὁμαλή, ἡ <δὲ> μέσον (vel μέσην) τούτων;  
 vide annotationem nostram

#### TRANSLATION:

25. The Oligon "has one sound" (i.e. denotes the interval of one step), and so has the Petasthe and the Oxeia. Some people wonder why three signs have been made to denote one sound - and not only one - though one sign would have sufficed everywhere. Our answer to these people is that the sound is realized in different ways - the step being a sharp one, a smooth one, or in between. The different signs were made because of this difference of sounds - and also because of the change of cheironomy.

#### NOTES:

- \* 1. As usually, the word φωνή is difficult to render. In 1-8 it refers to the interval, in 8-11 to the dynamic quality of the sound. The expression διαφοραὶ φωνῶν (9 and 11-12) does not refer to any difference as to the size of intervals.
- \* 2. It is difficult to find a safe remedy for the corrupt text in 9-11; I have suggested two different emendations. Obviously, the passage deals with the three signs Oligon Petasthe and Oxeia. The adjective ὀξεῖα evidently covers the dynamic quality of the Oxeia sign. The third of the signs being described as μέσον (or μέση?) between the others, the crucial point must be the adjective ὁμαλή. As long as we do not know the implication of the word (is the "even" or "smooth" sound characteristic for the neutral Oligon or for the small flourish of the Petasthe?), we cannot decide whether

"sharp" and "smooth" are the two extremes of the dynamic scale, or the notion of "smoothness" belongs to the middle position; in the latter case, we do not know how the sound should be termed which lies dynamically most removed from the *Oxeia*.

26. Ὁ ἀπόστροφος ἔχει φωνὴν  
μῖαν, καὶ οἱ δύο ἀπόστροφοι  
μῖαν. ἀποροῦσαι δέ τινες πρὸς  
τοῦτο, πῶς γίνεται. πρὸς οὓς.  
5 φαμεν, ὅτι κυρίως τόνοι εἰσὶ  
τέσσαρες· ὀλίγον, ὀξεῖα, πε-  
τασθή, καὶ ἀπόστροφος. τὴν  
οὖν ἐπὶ τὸ κεῖσθαι τὰ κατιόντα  
πνεύματα - τὸ ἐλαφρόν φημι καὶ  
10 τὴν χαμηλὴν - ἔμπροσθεν τοῦ  
ἀποστρόφου διακρίνη,† διὰ τὴν  
φωνὴν οὐκ ἔχει ὁ ἀπόστροφος·  
ἀλλὰ εἰ τύχοι ἔμπροσθεν ὧν τοῦ  
πνεύματος, τὴν μὲν φωνὴν  
15 ἔχει<ν> τὸ πνεῦμα γινώσκεις,  
τὸν δὲ ἀπόστροφον μὴ κλείεσθαι  
<δὲ> ὑπ' αὐτοῦ διὰ τὸ μὴ ἔχειν  
φωνὴν ἀλλ' ὥς τόνον κεῖσθαι·  
ἄνευ γὰρ αὐτοῦ οὔτε ἐλαφρόν  
20 γράφεται οὔτε χαμηλὴ, εἰ μὴ  
που μετὰ τῶν μεγάλων σημαδίων  
γραφῆσονται. πῶς γὰρ ἡδύνατο  
ὁ εἰς ἀπόστροφος καὶ πνεῦμα  
εἶναι καὶ τόνος, εἰ μὴ τις ἦν  
25 ἐν αὐτῷ διαφορὰ πρὸς τὸ δια-  
κρίνασθαι;
- P: ὁ ἀπόστροφος ἔχει φωνὴν  
μῖαν· καὶ οἱ δύο ἀπόστροφοι  
μῖαν· ἀποροῦσαι δέ τινες πρὸς  
τοῦτο πῶς γίνεται· πρὸς οὓς,  
φαμέν· ὅτι κυρίως τόνοι εἰσὶ  
τέσσαρες· ὀλίγον· ὀξεῖα· πε-  
τασθή, καὶ ἀπόστροφος ἔν·  
οὖν ἐπὶ τὸ κεῖσθαι τὰ κατιόντα  
πνεύματα· τὸ [ἐ]λαφρόν φημι καὶ  
τὴν χαμηλὴν· ἔμπροσθεν τοῦ  
ἀποστρόφου· διακρίνει, διατί  
φωνὴν οὐκ ἔχει ὁ ἀπόστροφος·  
ἀλλὰ οἱ τύχει ἔμπροσθεν αὐτοῦ  
πνεῦμα· τὴν μὲν φωνὴν  
ἔχει τὸ πνεῦμα γινώσκεις·  
τὸν δὲ ἀπόστροφον μὴ κλείεσθαι  
ὑπ' αὐτοῦ διὰ τὸ μὴ ἔχειν  
φωνὴν, ἀλλ' ὥς τόνον κεῖσθαι.  
ἄνευ γὰρ αὐτοῦ, οὔτε ἐλαφρόν  
γράφεται, οὔτε χαμηλὴ· εἰ μὴ  
που μετὰ τῶν μεγάλων σημαδίων  
γραφῆσονται· πῶς γὰρ ἡδύνατο,  
ὁ εἰς ἀπόστροφος καὶ πνεῦμα  
εἶναι καὶ τόνος, εἰ μὴ τις ἦν  
7x | ἐν αὐτῷ διαφορὰ, πρὸς τὸ δια-  
κρίνασθαι:-

7-11 locus corruptus, vide annotationem nostram 9 ἐλαφρόν vidit Perne

11 ἀποστρου(φου) P ante correcturam, correxit ipse in scribendo

11 διατί P, διότι coniecit Ebbesen 13 εἰ τύχοι coniecit Høeg,

οἱ τύχει P, οἱ τύχοι Thibaut ὧν τοῦ conieci, αὐτοῦ P 14 πνεύματος

conieci, πνεῦμα P 15 ἔχειν conieci, ἔχει P an γίνωσκε legendum?

16 κεῖσθαι Thibaut 17 δὲ supplui 24 τι Thibaut

## TRANSLATION:

26. The Apostrophos "has one sound" (cf. §25,1-2), and so have the Dyo Apostrophoi. Some people wonder how that can be. Our answer is that strictly speaking there are four Tonoi: Oligon, Oxeia, Petasthe, and Apostrophos. (The next lines are corrupt and cannot be translated; see Notes) ..... why the Apostrophos has no sound (in this situation); but if it (i.e. the Apostrophos) is placed before the Pneuma, you realize that it is the Pneuma - and not the Apostrophos - which has the sound, and that it (i.e. the Apostrophos) is "enclosed" by this sign (i.e. the Pneuma), because it (i.e. the Apostrophos) has no sound but is only placed as Tonos (i.e. neumatic sign). For without this sign (i.e. the Apostrophos) one writes neither Elaphron nor Chamele - except when these (i.e. the Pneumata) are written in combinations with the Megala Semadia. For how would it be possible for one Apostrophos to function both as a Pneuma and a Tonos, if there were no difference in it which could be observed?

## NOTES:

- \* 1. The transmitted text needs a considerable amount of emendations to yield a reasonable sense; no doubt, my present reconstruction needs to be revised - especially if a solution can be found to the corrupt lines 7-11. This solution might very well imply a loss of several lines of text, though it is not easy to define the exact place of a lacuna.
  - \* 2. In lines 7-11, the expression ἐπὶ τὸ μετῆσαι τὰ κατιόντα πνεύματα ἔμπροσθεν τοῦ ἀποστρόφου would imply the neumatic groups >^ and >^x; both of these are impossible, the correct configurations being >^ and >^x. At first, the transmitted text seems to find a support in lines 13-14, where P reads οὐ τύχει (i.e. εἰ τύχῃ) ἔμπροσθεν αὐτοῦ πνεύμα ("if a Pneuma is placed in front of the Apostrophos"). But we have no guarantee that 13-14 are correct, and only a couple of slight corrections are needed to make 13-14 correspond to usual neumatic practice. In a way, what really intrigues is why a copyist could possibly produce these absurd descriptions. His familiarity with musical manuscripts must have been very limited, indeed!
  - \* 3. The problem which is discussed in §26 is the intervallic identity between > and >>, both denoting one descending step. Evidently the paragraph belongs to a later layer - exactly as did the preceding paragraphs with their descriptions of Middle Byzantine notational system. Most of the reasoning (7-22) consists of remarks on situations where an Apostrophos looses its interval value (viz. when placed in front of a Pneuma). In such situations the Apostrophos, in the terminology of lines 17-18, "has no φωνή but is put as τόνος". I therefore infer that the explanation of the Dyo Apostrophoi would have to be that in this configuration the first Apostrophos is considered to be a Tonos, and that the μᾶ φωνή (2-3) belongs to the second Apostrophos, only. Apparently, then, the function of the second Apostrophos corresponds to the function of Elaphron or Chamele, the parallel being so relevant for our author that he ends up by the amazing statement that the Apostrophos at times is a Pneuma!
- Further corrections of the text would have to fit into this general line of thought.
- \* 4. The syntactical structure of 7-18 is unclear, and some of my deviations from the punctuation of P may, in the end, turn out to be wrong.
  - \* 5. In 14-17 the lacunas come so regularly that one gets the impression that the model manuscript, somehow, was physically damaged. Spilled ink? Worm holes? Or ultra-short lines damaged at a coherent area of the page,

maybe through a loss of an outer margin? Strange as this notion of ultra-short lines may seem to be, it finds some support in the following consideration: As already pointed out, the model manuscript of P (or one of his models) seems to have contained several marginal entries (cf. ad §12). Can it be that the entire Middle Byzantine layer was such marginal entries into a model which originally contained only the "old" Hagiopolites text? We have at least one parallel, the famous Venetus Marcianus app.VI,3 - a 12th cent. parchment volume in the margins of which a 14th cent. scribe added a number of complete texts of ancient musical theory (see Jan, *Musici Scriptores Graeci*, Lpz. 1895, pp.XVI-XXIV).

VII 27. Π<ν>εύματα δέ εἰσι τέσσαρα·  
κυρίως δέ δύο, τὸ ὑψηλὸν καὶ ἡ  
χαμηλὴ. ἀπορήσειε δ' ἄν τις, διὰ  
τί τὰ μὲν δύο πνεύματα ἔχουσιν  
5 ἀνὰ δύο φωνῶν, τὰ δέ δύο ἀνὰ  
τεσσάρων. πρὸς οὓς ἀπαντήσομεν,  
ὅτι ἐπειδὴ ὁ τεχνικός ἐξέθετο  
τὰ ἔχοντα ἀνὰ μίαν φωνὴν σημά-  
δια, μέλλων μεταβαίνειν ἐπὶ τὸ  
10 καὶ σημάδια ἐκτίθεσθαι ἀνὰ δύο  
φωνῶν ἔχοντα, ἐπεὶ οὐκ ἦν δυ-  
νατὸν τὰς ἐν τῷ ᾄμα ἐκτεινο-  
μένας φωνὰς ὑπὸ δύο σημαδίων  
γίνεσθαι ἀνὰ μίαν φωνὴν ἐχόν-  
15 των - εἰ γὰρ ἦν ἐν τῷ ᾄμα, ἀλλὰ  
καὶ μία καὶ μία ὄφειλον ἀνέρ-  
χεσθαι ἢ κατέρχεσθαι - τούτου  
χάριν τέθεικε τὰ δύο πνεύματα  
ἀνὰ δύο ἐχόντων φωνῶν, ἵνα ἐν  
20 τῷ ᾄμα αἱ φωναὶ ἀνέρχονται. τὸ  
δ' αὐτὸ νοήσεις καὶ ἐπὶ τῶν δ'  
ἐχόντων φωνάς· ὥσπερ ἐπὶ τῶν  
δύο, οὕτω δὴ καὶ ἐπὶ τῶν δ'.

P: Πεύματα δέ εἰσι τέσσαρα·  
κυρίως δέ δύο· πρὸ, ὑψηλὴ καὶ ἡ  
χαμηλὴ· ἀπορήσειε δ' ἄν τις, διὰ  
τί τὰ μὲν δύο πνεύματα, ἔχουσιν  
ἀνὰ δύο φωνῶν, τὰ δέ δύο ἀνα-  
τεσσάρων πρὸς οὓς ἀπαντήσομεν,  
ὅτι ἐπειδὴ ὁ τεχνικός ἐξέθετο  
τὰ ἔχοντα ἀνὰ μίαν φωνὴν σημά-  
διν· μέλλων μεταβαίνειν ἐπὶ τὸ  
καὶ σημάδια ἐκτίθεσθαι, ἀνὰ δύο  
φωνῶν ἔχοντα· ἐπεὶ οὐκ ἦν δυ-  
νατὸν τὰς ἐν τῷ ᾄμα ἐκτεινο-  
μίας φωνάς, ὑποδύο ση[α]δίων  
γίνεσθαι· ἀνὰ μίαν φωνὴν ἐχόν-  
των· ἢ γὰρ [ρ ἦν] ἐν τῷ ᾄμα· ἀλλὰ  
καὶ μία καὶ μία· ὄφειλον ἀνέρ-  
χεσθαι ἢ κατέρχεσθαι, τούτου  
χάριν τέθεικε τὰ δύο πνεύματα,  
ἀνὰ δύο ἐχόντων φωνῶν· ἵνα ἐν  
τῷ ᾄμα αἱ φωναὶ ἀνέρχονται· τὸ  
δ' αὐτὸ νοήσεις καὶ ἐπὶ τῶν δε-  
χόντων φωνάς· ὥσπερ ἐπὶ τῶν  
δύο, οὕτω δὴ καὶ ἐπὶ τῶν δ'·-

2 τὸ ὑψηλὴ P (fortasse cum Thibaut et Høeg retinendum) ἡ om Thibaut  
3 ἀπορήσει Thibaut 5 ἀνὰ<sup>1</sup>] ἄνευ Thibaut 8-9 σημάδιν P 12-13 ἐκτεινο-  
μίας P, ἐτεινομένας Thibaut, quem secutus ἐκτεινομένας scripsi, ἐντεινομί-  
ας Høeg (marg, cruce praefixo) 13 σημαδίων adhuc vidit Perne 15 ἢ γὰρ  
ἐν τῷ ᾄμα Thibaut, ἢ γὰρ οὐκ ἐν τῷ ᾄμα dubitans suppleuit Høeg, locum re-  
stituit Ebbesen 17 τούτο Thibaut (per errorem typographicum)  
21-22 δ' ἐχόντων coniecit Høeg, δεχόντων P

## TRANSLATION:

27. There are four Pneumata - properly speaking, however, there are only two: the Hypselon and the Chamele. One may wonder why two Pneumata contain two steps each, whereas each of the other two contains four. The answer is that when the author had exposed the signs which contain one step each, and wanted to pass on to exposing signs with two steps each, this was his reason to impose the two Pneumata with two steps each, namely in order that these steps can move together (i.e. be executed as a leap of one third). For it was impossible that the steps which should be taken together (i.e. as a leap) could be realized by means of two signs which contained one step each - for even if this had been possible, they might as well move up or down in stepwise movement, one by one. A similar consideration can also be applied to the signs which have four steps; the explanation concerning those with two is, of course, equally valid in the case of those with four.

## NOTES:

- \* 1. The question raised in this paragraph (3-6) is introduced by the expression ἀπορήσετε δ' ἂν τις, a favourite of Aristotelian commentators and other literature. In line 7, ὁ τεχνικός belongs to the same scholarly sphere, being a usual term for the "author" whose text is commented upon.
- \* 2. I fail to see why Hypsele and Chamele are more Pneumata than Kentema and Elaphron (lines 1-3). Curiously enough, these "Pneumata par excellence" do not reappear until the end of the paragraph (20-23). Obviously, they are not very important to the reasoning of our author - so why mention them so prominently in 1-3?
- \* 3. In his remarks, our author distinguishes between stepwise movement (μία καὶ μία 16) and leaps (ἐν τῷ ᾄμα 12, 15, 19-20). The signs by which these intervals are expressed, indicate seconds, thirds, and fifths (μία, δύο, or τέσσαρες φωναί). As there are more specimens of each type, he needs distributive expressions, with ἀνά. He here wavers in a most peculiar way: The "correct" way of describing would be, as in 8-9 and 14-15, σημάδια ἀνά μίαν φωνὴν ἔχοντα etc. But instead we find in P ἀνά δύο φωνῶν 5 and 10-11, ἀνά τεσσάρων 5-6, and ἀνά δύο ἐχόντων φωνῶν 19. In the last of these cases, the ἐχόντων is probably a copyist's error for ἔχοντα; but in the others, the genitives are less unlikely, being in accordance with the late usage of distributive ἀνά + genitive.

VIII 28. Ὑπ[οδῶρ]λος, ὑποφρύγιος, ὑπολύδιος, δῶριος, φρύγιος, λυ-  
 διος, μιξολύδιος, ὑπομιξολύδιος:-

ο̇ α̇' ο̇ β̇' ο̇ γ̇' ο̇ δ̇' ο̇ λ̇γ̇ ο̇ λ̇β̇ ο̇ λ̇γ̇ ο̇ λ̇δ̇'

1-3 symbola tonorum rubro colore scripsit P 1 Υπ δῶριος' P ut videtur,  
 Υποδῶριος' Perne, 'Υποδῶριος coniecit Høeg δῶριος P

## NOTES:

- \* 1. The modal signature for the Hypodorios has been lost in P. Perne's impossible reading ( $\hat{\Lambda}\eta$ ) shows that a signature was still extant at this time. I have supplied the missing  $\eta$ .
- \* 2. In the Paris manuscript, the list of the ancient names is to be found at the end of fol. 7r, whereas the diagram follows on the next verso. The punctuation and the arrangement of the context (:- after §27 and after §28,2; red initial letter at the beginning of §29) makes it hard to reconstruct the lay-out of the model manuscript. If the reference in §32 is to §28 ( $\kappa\alpha\theta\omega\varsigma\ \alpha\nu\alpha\gamma\acute{\epsilon}\gamma\rho\alpha\pi\tau\alpha\iota\ \acute{\epsilon}\nu\ \tau\omicron\iota\varsigma\ \acute{\alpha}\nu\omega\theta\epsilon\nu\ \sigma\chi\acute{\eta}\mu\alpha\sigma\iota$ ), one might infer that both parts of §28 were organic parts of the text. This, however, does not exclude the possibility that they were conceived as marginalia.
- \* 3. However that may be, §28 introduces §§29 sqq., the structural break being after §27.

29. Εἰπόντος ὅσα δὴ καὶ ἐξῆν  
περὶ τόνων διδασκαλίας, ἥδη  
μεταβῆναι δέον καὶ ἐπὶ τὴν τῶν  
ἤχων, ἵνα μὴ ἀτελής ὁ λόγος  
5 ἀποληφθῇ. ἐν ᾗ φήσομεν τὰ τε  
ὀνόματα αὐτῶν καὶ τὰς συγγε-  
νείας καὶ διαφορὰς αὐτῶν, καὶ  
ἕτερά τινα.

P: Εἰπόντος ὅσα δὴ καὶ ἐξῆν  
περιτόνων διδασκαλίας· ἥδη  
μεταβῆναι δέον καὶ ἐπὶ τὴν τῶν  
ἤχων· ἵνα μὴ ἀτελής ὁ λόγος  
ἀποληφθῇ· ἐν ᾗ φήσομεν τὰ τε  
ὀνόματα αὐτῶν, καὶ τὰς συγγε-  
νείας καὶ διαφορὰς αὐτῶν, καὶ  
ἕτερά τινα·

## TRANSLATION:

- IX 29. Having now said as much as possible on the subject of the Tonoi, it is time to turn to the Echoi, in order that our treatise shall not be discontinued without having reached its completion. In this part we shall speak of their names, their relationships and differences, and of other matters as well.

30. Τὰ μὲν οὖν ὀνόματα αὐτῶν  
προεγράφησαν, τὰ τε κυρίως καὶ  
τὰ τὴν τάξιν αὐτῶν δηλοῦντα.  
τοῦτο δὲ δεῦ νοεῖν ἐπὶ τῶν  
5 ἤχων, ὅτι οὐ ποσότητα φωνῶν  
ὀνομάζομεν ἀλλὰ ποιότητα· ὁξύ-  
τητα γὰρ καὶ βαρύτητα καὶ βρα-  
χύτητα καὶ τελειότητα καὶ λαμ-  
πρότητα φωνῶν εἰώθαμεν λέγειν,  
10 ἅ πάντα τῆς τοιαύτης φθογγῆς  
εἰσὶ σημαντικά, οὐ τῆς τόσης -  
καὶ πείας ἔν' ἐῖπω μᾶλλον, οὐχὶ

P: τὰ μὲν οὖν ὀνόματα αὐτῶν,  
προεγράφησαν τὰ τε κυρίως κα-  
τὰ τὴν τάξιν αὐτῶν δηλοῦντα·  
τοῦτο δὲ δεῦ νοεῖν ἐπὶ τῶν  
ἤχων, ὅτι ὑποσότητα φωνῶν  
ὀνομάζομεν, ἀλλὰ ποιότητα· ὁξύ-  
τητα γὰρ καὶ βαρύτητα· καὶ βρα-  
χύτητα[α καὶ] τελειότητα· καὶ λαμ-  
πρότητα φωνῶν εἰώθαμεν λέγειν  
ἅπαντα· τῆς πείας δὲ φθογγῆς  
εἰσὶ σημαντικά· οὐ τῆς τόσης  
καὶ πείας ἔν' ἐῖπω μᾶλλον οὐχὶ

πόσης. ὥστε οὐχὶ πρὸς ἀρίθμῃσιν  
 ἡμῖν τῶν ἤχων τὰς σημασίας εἰς-  
 15 ἀγούσιν, ἀλλ' ἢ ποιὰ τοῦ μέλους  
 φθογγὴ ἐκ τούτων παρίσταται.

πόσης· ὥστε οὐχὶ πρὸς ἀρίθμῃσιν  
 ἡμῖν τῶν ἤχων τὰς σημασίας εἰς-  
 ἀγούσιν· ἀλλ' ἢ ποιὰ τοῦ μέλους  
 φθογγὴ ἐκ τούτων παρίσταται·

2 τὰ] accentum addidit rubricator 2-3 καὶ τὰ scripsi, κατὰ P 5 οὐ πο-  
 σότητα Høeg, ὑποσότητα P 6 sqq lacunas suppleuit Høeg 6-7 ὀξύτητα] ac-  
 centum addidit rubricator 10 ἅ πάντα scripsi, ἅπαντα P (qui aliter in-  
 terpunxit) τοῦτ' οὖν scripsi, πᾶς δὲ P 12-13 ἀν ποιᾶς et ποσῆς scri-  
 bendum?

#### TRANSLATION:

30. Their names have already been written, both their proper names and those which indicate their order. As far as concerns the Echoi, however, it must be born in mind that we do not name the quantity of sounds, but the quality. For about sounds we normally use expressions like "shrillness", "deepness", "shortness", "completeness", and "clearness" - all of which denote the "such or such" sound, not the "so great" sound, or rather of what kind the sound is, not of what magnitude. Thus, the designations of the Echoi are not made for counting purposes but to represent the sound quality of the Melos.

#### NOTES:

- \* 1. The subject-matter of §§30-32 is said to be αἱ τῶν ἤχων σημασίαι (§30, 14 and §32,28) or ὀνόματα (§30,1; cf. the preceding summary, §29,6). Evidently, however, the interest of the author is not the names themselves - neither "their proper names", i.e. the Ancient nomenclature, nor "those which indicate their order", i.e. the standard Byzantine nomenclature; for these he just gives a reference to §5, maybe also to the conspectus in §28. What really interests him is their order, the reason why the Hypodorian is put first, the Hypophrygian second, etc.
- \* 2. The transmitted text of lines 10-16 is corrupt. I have tried to correct its wording and punctuation in the light of lines 5-6, the key-word being πολότης.
- \* 3. 'Ονομάζομεν (6) perhaps may be paraphrased as "the names which we use for the Echoi do not refer to 'magnitude' but to quality".
- \* 4. The erroneous idea that the names have to do with ποσότης (5-6) is dismissed once more, in 13-15 where the word ἀρίθμησις is used. In later theory, the word ποσότης (or τὸ ποσόν) refers to the size of intervals, a notion which would also be possible for ἀρίθμησις, if understood as "a counting of the number of φωναί for a given interval". However, both notions (of "magnitude" and of "counting") were introduced in the present context only to put the key-word πολότης into relief; there is no reason to think that they refer to any reality in connection with the Echoi (such as a counting of the size of intervals between their relative position). The Byzantine nomenclature itself would sufficiently explain why the author got the idea to use these expressions as background for §§31-32.

31. Διὰ [τί] τοῦτο οὐδέ τὸ δῶριον  
μέλος τὴν προτίμησιν ἐν τοῖς  
ἤχοις ἐδέξατο, τὸ δὲ ὑποδῶριον,  
ὥς κρείττονα λόγον ἔχον τῶν  
5 λοιπῶν ἤχων· ὁμοίως οὐδέ τὸ 8x  
φρύγιον μέλος τὴν δευτέραν τά-  
ξιν ἔσχευ ἐν τοῖς ἤχοις, ἀλλὰ  
τὸ ὑποφρύγιον· καὶ <τὸ> λυδίον  
ὡσαύτως τοῦ ὑπολυδίου οὐ προ-  
10 ετιμήθη. ετιμήθη·

1 τί seclusi 4 κρείττονα λόγον Høeg, κρεῖττον ἀλόγων P 8 ὑποφρύδιον  
καὶ λυδίον P, interpunctionem correxi, τὸ addidit Ebbesen

#### TRANSLATION:

31. This is also why the Dorian Melos did not receive the place of honour among the Echoi; this place was given to the Hypodorian, because it is better than the other Echoi. Nor did the Phrygian Melos receive the second position among the Echoi, but the Hypophrygian. And in the same way the Lydian was not given preference to the Hypolydian.

#### NOTES:

- \* 1. The addition of τί (1) and the omission of τὸ (8) may be deliberate emendations. The text should then be understood as a series of questions: "Why is that? And why was the place of honour among the Echoi given to the Hypodorian and not to the Dorian, considering that the latter is better than the other Echoi? Similarly, why did the Phrygian Melos not receive the second place among the Echoi? But as to the Hypophrygian and Lydian, why were these not honoured more than the Hypolydian?" Although this text cannot be correct, it nevertheless betrays a certain level of ingenuity and cannot be due to the scribe of P who in the same context committed such nonsense as κρεῖττον ἀλόγων (4) and ὑποφρύδιον (8).

32. Καὶ ἔδει αὐτοὺς ὥς τὴν τά- P: καὶ ἔχει αὐτοὺς ὥς τὴν τά-  
ξιν προέχοντας ἐξ ἀπλῶν ὀνομάτ-  
ων καὶ μὴ ἀπὸ συνθέτων γνωρίζε-  
σθαι, οἷον τί φημι, τὸν πρῶτον  
5 ἦχον ἀπὸ δωρίου μέλους καὶ μὴ  
ἀπὸ ὑποδωρίου, καὶ τὸν δεύτερον  
ἀπὸ τοῦ φρυγίου καὶ μὴ ἀπὸ τοῦ  
ὑποφρυγίου, καὶ τρίτον ὁμοίως  
ἀπὸ λυδίου καὶ μὴ ἀπὸ τοῦ ὑπο-  
10 λυδίου, ὥσπερ δὲ ὁ τέταρτος  
[οὐκ] ἀπὸ τοῦ δωρίου μέλους οὐκ ἀπὸ τοῦ δωρίου μέλους

χαρακτηρίζεται - ἀλλ' ἐν τῇ εὐ-  
 τονίᾳ τῶν φθόγγων τὸ ὑπόδωριον,  
 ἐν τῇ ἡδύτητι τὸ ὑποφρύγιον,  
 15 ἐν δὲ τῇ χαλεπότητι τὸ ὑπολύ-  
 διον· ἃ τοὺς πρώτους φθόγγους  
 τῆς μουσικῆς διαρρήδην εἰσάγ-  
 ουσιν. τοῦτου χάριν ἀπενεμήθη  
 τῷ πρώτῳ ἡ ὑποδώριος· καὶ ἐν  
 20 τοῖς ἑτέροις, καθὼς ἀναγέγραπ-  
 ται ἐν τοῖς ἄνωθεν σχήμασι·  
 οὗτοι γὰρ εἰσι τῶν μουσικῶν  
 φθόγγων ἐπισημότατοι, καθὼς  
 ἴσασιν οἱ τὰ τῶν μουσικῶν χορ-  
 25 δῶν ἀπηχήματα εἰδότες καὶ δια-  
 κρίνοντες ἐντέχνως. ἀλλὰ ταῦτα  
 μὲν ὑπεγράφη πρὸς δῆλωσιν τῆς  
 τῶν ᾠχων σημασίας.

χαρακτηρίζεται· ἀλλ' ἐν τῇ εὐ-  
 τονίᾳ τῶν φθόγγων τὸ ὑποδωρ[ιον]  
 ἐν τῇ ἡδύτητι, τὸ ὑποφρύγιον·  
 ἐν δὲ τῇ χαλ[ε]πότητι τὸ ὑπολύ-  
 διον· ἃ τοὺς πρώτους φθόγγους  
 τῆς μουσικῆς διαρρήδην εἰσάγ-  
 ουσιν. τοῦτου χάριν ἀπενεμήθη  
 τῷ πρώτῳ ἡ ὑποδώριος· καὶ ἐν  
 τοῖς ἑτέροις καθὼς ἀναγέγραπ-  
 ται ἐν τοῖς ἄνωθεν σχήμασι·  
 οὗτοι γὰρ εἰσι τῶν μουσικῶν  
 φθόγγων ἐπισημότητα καθὼς  
 ἴσασιν οἱ τὰ τῶν μουσικῶν χορ-  
 δων ἀπηχήματα εἰδότες καὶ δια-  
 30 κρίνοντες ἐντέχνως· ἀλλὰ ταῦτα  
 μὲν ὑπεγράφει πρὸς δῆλωσιν τῆς  
 τῶν ᾠχων σημασίας:-

1 ἔδει Ebbesen, ἔχει P    10 δέ P    11 οὐκ seclusi    13 υποδωριων adhuc  
 vidit Perne    23 ἐπισημότατοι Ebbesen, ἐπισημότητα P    27 ὑπεγράφει P

#### TRANSLATION:

32. Also, since they (*i.e. the three Echoi just mentioned*) come first in order, one might think that they should be called from the simple names, not from the composite ones - the first Echos, *e.g.*, from the Dorian Melos and not from the Hypodorian, the second from the Phrygian and not from the Hypophrygian, and similarly the third from the Lydian Melos and not from the Hypolydian - exactly as the fourth Echos is "characterized" from the Dorian Melos (*i.e. has been called from a Melos which carries an in-composite name*). But as far as vigour of the sounds is concerned, the Hypodorian <prevails?>, in sweetness the Hypophrygian, and in harshness the Hypolydian - *i.e. the Mele* which are explicitly presented as "the first sounds of the Mousike". This is why the term 'Hypodorios' was assigned to the first Echos. Similarly in the other Echoi, as described in the above diagrams. For these (*i.e. the three Echoi just mentioned*) are the most remarkable of the "sounds of Music", as is well known by those who are familiar with the sounding of the musical chords and skillfully are able to distinguish between them. The above has been outlined to clarify the names of the Echoi.

#### NOTES:

- \* 1. The οὐκ in line 11 probably belongs to the same layer of 'emendations' as the readings mentioned in §31, note 1. Also, maybe, the δέ (for δῆ) in the preceeding line.
- \* 2. The πρῶτοι φθόγγοι τῆς μουσικῆς (16-17) reappear in 22-23 as τῶν μουσικῶν φθόγγων ἐπισημότατοι. For a possible meaning of ἡ μουσική, see §10,

note 1. I am far from being sure, however, that I have understood this difficult paragraph correctly.

- \* 3. The passage where the three 'ύπο-modes' are characterized (12-16) reminds to some extent of Bryennius's description of the three *genera* (Harmonics I.7. ed. Jonker pp.112-14).
- \* 4. For ἀπήχημα as a term for 'sound' (25), see last line of §100. According to Hannick (in Herbert Hunger: Die hochsprachliche profane Literatur der Byzantiner. II, München 1978, pp. 189-90) it belongs to the terminology of Georgios Pachymeres.
- \* 5. The reference in 20-21 must be to §28.

- |  |  |
|--|--|
| <p>X 33. Τεσσάρων τοίνυν ὄντων τῶν κυρίων καὶ πρώτων, ἐξ αὐτῶν ἐπ-εισήχθησαν οἱ τέσσαρες πλαγί-οι. τὸν αὐτὸν δὴ τρόπον καὶ ἐκ</p> <p>5 τῶν τεσσάρων πλαγίων οἱ τέσσα-ρες μέσοι, ἐκ δὲ τῶν μέσων πά-λιν αἱ φθοραί. οἷον τί φημι, οἱ</p> <p>1 μὲν τέσσαρες πρώτοι ἔχουσι τὸ ἀμεταποίητον, οἱ δὲ πλαγιοὶ ἔ-</p> <p>10 χουσι τὰς ὑπαλλαγὰς αὐτῶν, ἐξ ὧν οἱ μέσοι ἀποτίκτονται· οἷον ὁ μέσος πρῶτος ἐν τῇ ὑποβολῇ τῆς ἀρχῆς αὐτοῦ καὶ ἐν τῇ ἀπο-θέσει τοῦ τέλους <sup>πα</sup> καὶ ἀρχεται</p> <p>15 καὶ τελειοῦται· ἡμιπλαγιοτεταρ-τίζει &lt;δὲ&gt;, καὶ τοῦτό ἐστιν ὁ-περ ἔχει ἐπέκεινα τοῦ <sup>πα</sup>. ὁ-μοίως καὶ ὁ μέσος δεύτερος ἀπὸ τοῦ <sup>πβ</sup> ἀρχόμενός ἐστιν· ἀλλ'</p> <p>20 ἐὰν μεθ' ὧν ἐνηχῆσης πλαγιοδεύ-τερον ἐπάγης ἐπήχημα τὸν νενανῶ, μέσος δεύτερος ψάλλεται. ὡσαύ-τως καὶ ὁ μέσος τρίτος ἀπὸ τοῦ βαρέως τίκτεται, ὥσπερ δὴ καὶ</p> <p>25 ὁ μέσος τέταρτος ἀπὸ τοῦ <sup>πδ</sup>, καθὼς ἡμῖν ὁ λόγος πρὸς τὰ ἐξῆς παραστήσει ἀριδηλότερον.</p> | <p>P: Τεσσάρων τοίνυν ὄντων τῶν κυρίων καὶ πρώτων· ἐξ αὐτῶν ἐπ-εισήχθησαν οἱ τέσσαρες πλαγί-οι· τὸν αὐτὸν δὴ τρόπον καὶ ἐκ τῶν τεσσάρων πλαγίων, οἱ τεσσα-ρες μέσοι· ἐκ δὲ τῶν μέσων πά-λιν αἱ φθοραί· οἷον τί φημι, εἰ μὲν τέσσαρες πρώτοι, ἔχουσι τὸ ἀμεταποίητον· οἱ δὲ πλαγιοὶ ἔ-χουσι τὰς ὑπαλλαγὰς αὐτῶν· ἐξ ὧν οἱ μέσοι ἀποτίκτονται· οἷον ὁ μέσος πρῶτος ἐν τῇ ὑπερβολῇ τῆς ἀρχ[ῆς] αὐτοῦ καὶ ἐν τῇ ἀπο-θέσει τοῦ τέλους, <sup>πα</sup> κα[ὶ] <sup>α</sup>ρχεται καὶ τελειοῦται ἡμιπλαγιοτεταρ-τίζει· καὶ τοῦτό ἐστιν ὁ-περ ἔχει ἐπέκεινα τοῦ <sup>πα</sup>· ὁ-μοίως καὶ ὁ μέσος δεύτερος ἀπὸ τοῦ <sup>πβ</sup> ἀρχόμενος ἐστίν, ἀλλ' ἐὰν μεθ' ὧν ἐνηχῆσης πλαγιοδευ-τ( ) ἐπάγης ἐπήχημα τὸν νενανῶ μέσος δεύτ( ) ψάλλεται. ὡσαύ-τως καὶ ὁ μέσος τρίτος ἀπὸ τοῦ βαρέως τίκτεται· ὥσπερ δὴ καὶ ὁ μέσος τέταρτος, ἀπὸ τοῦ <sup>πδ</sup> καθὼς ἡμῖν ὁ λόγο[ς] πρὸς τὰ ἐξῆς παραστήσει ἀριδηλότερον·</p> |
|--|--|

7-8 εἰ μὲν P, correxit Høeg 12 ὑποβολῇ scripsi, ut in § 7, ὑπερβολῇ P  
13-14 lacunas supplevit Høeg 16 δὲ addidit Ebbesen 20 μεθ' ὧν P

## TRANSLATION:

33. The proper and primary Echoi, then, are four in number. From these the four Plagal have been derived. In the same manner also the four Mesoi have been made from the four Plagal, and again the Phthorai from the Mesoi. Or, to put it differently: The four primary Echoi are non-transformed, whereas the plagal ones have their changes, from which the Mesoi are generated. The Mesos Protos, for instance, begins and ends as Plagios Protos - in its beginning and its ending; it is somewhat related to Plagios Tetartos, the only feature which makes it different from Plagios Protos. In a similar way the Mesos Deuterios takes its beginning from Plagios Deuterios; but if, after the Plagios Deuterios Enechema, you add Nenano as Epechema, a Mesos Deuterios is sung. Similarly, Mesos Tritos is generated from Barys, just as Mesos Tetartos from Plagios Tetartos. The mechanism of all this will be described more clearly in the following.

## NOTES:

- \* 1. The way in which the Echoi are generated has been treated already in §§6-7. See also below, §§47-48.
- \* 2. The ἔχουσι τὸ ἀμεταποίητον (8-9) has the ring of a *terminus technicus*; it seems to convey the same idea as §6,2 (οὐκ ἐξ ἄλλων τινων ἀλλ' ἐξ αὐτῶν).
- \* 3. Perhaps the ὑπαλλαγαί (10) denote changes in musical expression, e.g. occurrence of formulas which are alien to the Echos; cf. the exemplification in 11-17.
- \* 4. The verbal similarity between 11-17 and §7,1-6 is striking; but it is difficult to decide for which of the two paragraphs the text was originally coined. Maybe both are derived from a common source?

34. Ἐκ δὲ τῶν μέσων πάλιν εἰσ-  
 ἤχθησαν αἱ φθοραὶ - ἐκ μὲν τοῦ  
 μέσου πρώτου φθορὰ πρώτη, ὡς-  
 αὐτως καὶ τῶν ἄλλων. φθοραὶ δὲ  
 5 ὠνομάσθησαν, ὅτι ἐκ τῶν ἰδίων  
 ἤχων ἀπάρχονται, τελειοῦνται  
 δὲ εἰς ἑτέρων ἤχων φθογγὰς αἱ  
 θέσεις αὐτῶν καὶ τὰ ἀποτελέσ-  
 ματα. ἵνα δὲ σαφέστερον γένηται  
 10 τὸ λεγόμενον, πότε καὶ ἐν ποι-  
 οῖς ἤχοις αἱ φθοραὶ τὴν ἐνέρ-  
 γειαν αὐτῶν ἐπιδείκνυνται, δεόν  
 ἐλογισάμην ὡς ἐν σχήματι διαχα-  
 ράξαι αὐτούς:

P: ἐκ δὲ τῶν μέσων πάλιν εἰσ-  
 ἤχθησαν αἱ φθοραὶ· ἐκ μὲν τοῦ  
 μέσου πρώτου, φθορὰ πρώτη· ὡς-  
 αὐτως καὶ τῶν ἄλλων· φθοραὶ δὲ  
 ὠνομάσθησαν, ὅτι ἐκ τῶν ἰδίων  
 ἤχων ἀπάρχονται· τελειοῦνται  
 δὲ εἰς ἑτέρων ἤχων φθογγὰς· αἱ  
 θέσεις αὐτῶν καὶ τὰ ἀποτελέσ-  
 ματα· ἵνα δὲ σαφέστερον γένηται  
 τὸ λεγόμενον, πότε καὶ ἐν ποι-  
 οῖς ἤχοις αἱ φθοραὶ τὴν ἐνέρ-  
 γειαν αὐτῶν ἐπιδείκνυνται, δεόν  
 ἐλογισάμην ὡς ἐν σχήματι διαχα-  
 ράξαι αὐτούς:-

π <sup>α</sup> ′	γ <sup>′</sup>	Α <sup>Β</sup> ′	μ <sup>μ</sup>	γ <sup>′</sup>	Α <sup>Δ</sup> ′	π <sup>Δ</sup> ′	μ <sup>Δ</sup>
μ <sup>μ</sup> ′	π <sup>γ</sup>	Α <sup>Δ</sup>	γ <sup>′</sup>	μ <sup>Δ</sup>	π <sup>Β</sup> ′	[Β′]	π <sup>Δ</sup> ′

14 an αὐτάς legendum ? 15-16 ut in P tradita sunt; corruptelas infra (§ 35, annot. 3) emendare conaui

# TRANSLATION:

34. From the Mesoi, again, the Phthorai were derived, the first Phthora from the Mesos Protos, etc. They were called Phthorai (i.e. *destroyers*), because they begin from their own Echoi, but their endings and cadences are on notes from other Echoi. In order that this can be more clear - when do the Phthorai display their effect, and in which Echoi? - I have found it necessary to depict them in a diagram.

# NOTES:

- \* 1. I have taken θέσεις and ἀποτελέσματα (6-9) as synonyms, failing to see how θέσεις (in the usual meaning of "musical formulas") can be said to end (τελειοῦνται) εἰς ἐτέρων ἤχων φθογγάς. Also in §48 we find that cadential formulas are described in synonyms ((πληρώματα and ἀποθέσεις).
- \* 2. If αὐτούς in 14 is correct, it may refer to the modal signatures inscribed in the following diagram. For ἦχος as a term for "modal signature", see J. Raasted, *Intonation Formulas and Modal Signatures...* Copenhagen, 1966, p.43. Otherwise, a correction into αὐτάς will give a smooth text.
- \* 3. The diagram seems to be corrupt, see §35, note 3.

XI 35. Ἰδοὺ ὁ παρὼν σχηματισμὸς  
τὰ τῶν φθορῶν ἡμῖν ἐγνώρισεν  
ἰδιώματα. εἰ γὰρ ἀπὸ ἤχου πλα-  
γιοπρώτου τὴν μελωδίαν εἰς ἡ-  
5 χον βαρὺν παρενεχθῆναι συμβαί-  
νει - ὃ πολλάκις γίνεται τοῦ  
μέσου πρώτου μεσολαβοῦντος, ὃς  
ἐκ τοῦ πλαγίου πρώτου τίκτεσθαι  
εἰώθεν, ὡς μικρὸν ἀνωθεν εἴρη-  
10 ται - ἢ ἀπὸ βαρέως ἤχου τὸ ἀνά-  
παλιν εἰς ἤχον <sup>λ</sup>πα' τὸ μέλος  
περιτρέπεται ἢ καὶ τέλειον  
καταλήγει· ὃ πολλάκις συμβαί-  
νει, ὁπνὴκα μέσος τρίτος μεσο-  
15 λαβεῖ σοι ἐν τῷ μέλει τοῦ ᾄσ-  
ματος· ὃς μέσος τρίτος ἀπὸ τοῦ  
βαρέως ἤχου τὴν ὕπαρξιν ἔχει.  
εἴτε οὖν οὕτω εἴτε ἐκεῖνο γε-  
νηται, εὐθέως ἡμῖν γνωστὸν καθ-  
20 ἴσταται ἢ πρώτη φθορά. ὥσπερ

P: Ἰδοὺ ὁ παρὼν σχηματισμὸς  
τὰ τῶν φθόγγων ἡμῖν ἐγνώρισεν  
ἰδιώματα· εἰ γὰρ ἀπὸ ἤχου πλα-  
γιοπρώτου τὴν μελωδίαν εἰς ἡ-  
χον βαρὺν παρενεχθῆναι συμβαί-  
νει· ὃ πολλάκις γίνεται τοῦ  
μέσου πρώτου μεσολαβοῦντος ὡς  
ἐκ τοῦ πλαγίου πρώτου τίκτεσθαι·  
εἰώθεν ὡς μικρὸν ἀνωθεν εἴρη-  
ται· ἢ ἀπὸ βαρέως ἤχου τὸ ἀνά-  
παλιν εἰς ἤχον <sup>λ</sup>πα' τὸ μέλος  
9v | περιτρέπεται· ἢ καὶ τέλειον  
καταλήγει· ὃ πολλάκις συμβαί-  
νει ὁπνὴκα μέσος τρίτος μεσο-  
λαβεῖ σοι ἐν τῷ μέλει τοῦ ᾄσ-  
ματος· ὃς μέσος τρίτος ἀπὸ τοῦ  
βαρέως ἤχου τὴν ὕπαρξιν ἔχει·  
εἴτε οὖν οὕτω εἴτε ἐκεῖνο γε-  
νηται· εὐθέως ἡμῖν γνωστὸν καθ-  
ἴσταται ἢ πρώτη φθορά· ὥσπερ

πάλιν δευτέρα φθορά γινώσκεται,  
 όταν από ἤχου πβ' ἀρξώμεθα καὶ  
 ἐκτραπῶμεν εἰς πδ' - ὃ πολλάκις  
 γίνεται τοῦ μέσου δευτέρου παρε-  
 25 νεχθέντος, ὅς ἀπὸ τοῦ πβ' ἀπο-  
 τίκεται - ἢ τὸ ἀνάπαλιν όταν  
 πδ' ἀρξώμεθα καὶ εἰς πβ' ἤχον  
 ἐξενεχθῶμεν· ὃ γίνεται τοῦ μέ-  
 σου τετάρτου εἰσαχθέντος ἐν τῇ  
 30 τοῦ ψαλλομένου μελωδίᾳ, ὅς καὶ  
 αὐτὸς ἀπὸ τοῦ πλαγιοτετάρτου  
 γεννᾶται. ὁμοίως δὲ καὶ ἡ τρίτη  
 φθορά τῶν ἤχων καὶ ἡ τετάρτη  
 οὕτως γινώσκεται· ἡ μὲν τρίτη,  
 35 όταν ἀπὸ βαρέως ἤχου εἰς πρῶτον  
 ἤχον μέλος τῆς φωνῆς περιενεχθῇ,  
 ἢ τοῦναντίον ἀπὸ ἤχου πρώτου εἰς  
 ἤχον βαρύν· ἡ δὲ δ', όταν ἀπὸ  
 40 πδ' ἀρξηται ἡ μελωδία καὶ εἰς  
 ἤχον δεύτερον περιτραπῇ ἢ κατα-  
 λήξῃ, ἢ τὸ ἀνάπαλιν ἀπὸ τοῦ  
 δευτέρου ἤχου εἰς πδ' ἐξενεχθῇ.  
 ἀλλὰ ταῦτα μὲν ἐξεθέμεθα πρὸς  
 45 τὸ γνωρίσαι δεκαεῖς ἤχους εἶναι  
 τοῦ ᾄσματος, ὡς πολλάκις εἰρή-  
 καμεν.

πάλιν δευτέρα φθορά γινώσκεται  
 όταν ἀπὸ ἤχου πβ' ἀρξώμεθα καὶ  
 ἐκτραπῶμεν εἰς πδ' ὃ πολλάκις  
 γίνεται τοῦ μέσου δευτέρου παρε-  
 νεχθέντος· ὅς ἀπὸ τοῦ πβ' ἀπο-  
 τίκεται· ἢ τὸ ἀνάπαλιν όταν  
 πδ' ἀ[ρξώ]μεθα· καὶ εἰς πβ' ἤχον  
 ἐξενεχθῶμεν· ὃ γίνετα[ι τοῦ] μέ-  
 σου τετάρτου εἰσαχθέντος ἐν τῇ  
 τοῦ ψαλλομένου μελωδίᾳ, ὅς καὶ  
 αὐτὸς ἀπὸ τοῦ πλαγιοτετάρτου  
 γεννᾶται· ὁμοίως δὲ καὶ ἡ τρίτη  
 φθορά τῶν ἤχων καὶ ἡ τετάρτη,  
 οὕτως γινώσκεται· ἡ μὲν τρίτη,  
 όταν ἀπὸ βαρέος ἤχου εἰς πρῶτον  
 ἤχον μέλος τῆς φωνῆς περιενεχθῇ·  
 ἢ τοῦναντίον ἀπὸ ἤχου πρώτου εἰς  
 ἤχον βαρύν· ὃ δὲ δ' όταν ἀπὸ  
 10r πδ' ἀρξηται ἡ μελωδία, καὶ εἰς  
 ἤχον δεύτερον περιτραπῇ ἢ κατα-  
 λήξῃ· ἢ τὸ ἀνάπαλιν ἀπὸ τοῦ  
 δευτέρου ἤχου εἰς πδ' ἐξενεχθῇ·  
 ἀλλὰ ταῦτα μὲν ἐξεθέμεθα πρὸς  
 τὸ γνωρίσαι δεκαεῖς ἤχους εἶναι  
 τοῦ ᾄσματος ὡς πολλάκις εἰρή-  
 καμεν·

2 φθορῶν scripsi, φθόγγων P 7 ὡς P 27 ἀρξώμεθα adhuc vidit Perne,  
 ἀρχόμεθα suppleuit Høeg 28 lacunam suppleui 30 post ψαλλομένου iterum  
 μένου scripsit P, deleuit rubricator 39 ὁ P, correxi 41 post περι-  
 τραπῇ quattuor puncta ( ∴ ) sub lin add P (man sec ut videtur), lacunam  
 fortasse suspicans

#### TRANSLATION:

35. Please have a look at this diagram; it shows us the specific characteristics of the Phthorai:

A melody may move from Plagios Protos to Barys, frequently due to the occurrence of Mesos Protos which (as mentioned a little above) is normally generated from Plagios Protos; or *vice versa* the melody makes a shift from Barys to Plagios Protos - temporarily or to the very end - as it frequently happens when you come across Mesos Tritos "in the melody of the song"; for

Mesos Tritos derives its existence from Barys. In both these situations, then, we immediately realize the presence of the First Phthora.

Similarly, the Second Phthora is perceived when we begin from Plagios Deuterios and switch over to Plagios Tetartos, frequently in connection with Mesos Deuterios which is generated from Plagios Deuterios; or *vice versa*, when our beginning is Plagios Tetartos and we are being taken to Plagios Deuterios - as it happens when Mesos Tetartos is introduced "in the melody of the chant"; for this very Mesos is derived from Plagios Tetartos.

Similarly, also the Third and the Fourth Phthora are perceived in the same manner - the Third when "the melody of the voice" moves from Barys to Protos or, oppositely, from Protos to Barys; the Fourth when the melody begins from Plagios Tetartos and moves into Deuterios - temporarily or to the very end - or, oppositely, changes from Deuterios to Plagios Tetartos.

These remarks of ours were meant to show that there are sixteen Echoi of chant, as already mentioned again and again.

#### NOTES:

- \* 1. The four sections which describe the four Phthorai (lines 3-20, 20-32, 32-39, 39-43) have a fixed structure, but a remarkable variation in the diction. Thanks to this *variatio sermonis* it is comparatively easy to follow the line of thought. But even so, there are a few dubious points. Thus, in 12-13 (περιτρέπεται ἢ καὶ τέλειον καταλήγει) and in the parallel case (41-42), the distinction seems to be between partial and permanent modulations. But why is this distinction mentioned only in connection with modulation from Barys to Plagios Protos and from Plagios Tetartos to Deuterios? Is this just another case of *variatio sermonis*, the distinction being elsewhere mentally supplied (i.e. at παρενεχθῆναι in 5, ἐκτραπῶμεν in 23 and at the corresponding single words in 28, 36, and 43) - or does the distinction in 12-13 and 41-42 reflect particular features of these two situations?
- \* 2. If the four sublinear dots after περιτραπῇ (41) are intended to denote a lacuna, one inference would be that the person who wrote them had access to another copy of the text; for the wording of P is by no means suspect in itself. There is no corresponding entry in the margins; but the manuscript margins are cut and there is a great triangular hole in the lower margin, so we cannot exclude the possibility that there once was such an entry.  
If something is really missing in the text, the word, or words which had fallen out may be guessed from the parallel in lines 12-13. In 12 there is an adverbial joined to καταλήγει; but since the dots in 41 are placed before the ἢ, the modifying element would have belonged to περιτραπῇ, not to καταλήξει. Inspired by the beginning of Chrysaphes's treatise (Tardo, p. 235) I suggest an original περιτραπῇ δὲ ὀλίγου (or μερικῶς?). This would fit to the author's predilection for variation.
- \* 3. In its transmitted form the diagram of §34 cannot be correct; for of its eight columns, the second and eighth do not follow the overall pattern of the arrangement (the two signatures of each column have the distance of a third). Now, a reasonable inference from §35, 1-3 would be that the commentary in §35 follows the diagram from one end to the other. Columns 1-2 ought therefore to be corrected in the light of lines 3-6 and 10-13, and the Protos signature of column 2 should accordingly be corrected into a Barys signature. Similarly, a comparison of columns 7-8 with lines 39-43 suggests that the Barys of column 8 should be corrected into a Deuterios signature. Both errors may be palaeographically explained. But the diagram needs one further adjustment: According to the pattern of arrangement,

columns 3 and 6 ought to be in direct contact - and from §35,22-23 and 26-28 we may infer that the misplaced one is column 6. I fail to see any reason for the misplacing.

The diagram in its corrected shape would then be as follows:

ⲡⲓ	ⲙⲉ	ⲡⲃ	ⲡⲃⲓ	ⲙⲉ	ⲓ	ⲡⲃ	ⲃ
ⲙⲉ	ⲡⲓ	ⲡⲃⲓ	ⲡⲃ	ⲓ	ⲙⲉ	ⲃ	ⲡⲃⲓ

- XII 36. Οἱ οὖν βαθύτερον νοήσαντες, P: ἰ οὖν βαθύτερον νοήσαντες,  
 ἔφησαν καὶ κυρίους εἶναι ἀπὸ ἔφησαν καὶ κυρίους εἶναι ἀπὸ  
 κυρίων, εἴπερ εἰσὶν οἱ αὐτοί, κυρίων εἴπερ εἰσὶν οἱ αὐτοί.  
 ἐνίοτε δὲ καὶ κυρίους πλαγίους ἐνίοτε δὲ καὶ κυρίους πλαγίους  
 5 γενέσθαι κατὰ τὸν τοῦ μέλους γενέσθαι κατὰ τὸν τοῦ μέλους  
 ρυθμόν· ὅπερ ἐστὶ φανερόν τοῖς ρυθμόν· ὅπερ ἐστὶ φανερόν τοῖς  
 ἀκριβῶς ἀνιχνεύουσι τὸν Ἅγιο- ἀκριβῶς ἀνιχνεύουσι τὸν Ἅγιο-  
 πολίτην. πολίτην.

1 litteram O omisit rubricator 4 κυρίους P

#### TRANSLATION:

36. Those who have looked more deeply into these problems have maintained that there are also "Kyrioi from Kyrioi" (if indeed these are the same), and that sometimes Kyrioi become Plagioi during the flow of the melody. This (i.e. the truth of this statement) is obvious to those who make a careful search in the Hagiopolites.

#### NOTES:

- \* 1. I do not understand the implications of the parenthetical remark in line 3.
- \* 2. Κατὰ τὸν τοῦ μέλους ρυθμόν (5-6) is probably nothing but a periphrastic way of saying "en route".
- \* 3. The "Hagiopolites" of the final remark sounds more like the title of a book of chant than that of a treatise on musical theory.

37. Ἐπειδὴ εἰσὶν ἀπὸ κυρίων κύ- P: Ἐπειδὴ εἰσὶν ἀπὸ κυρίων κύ-  
 ριοι καὶ ἀπὸ πλαγίων πλάγιοι, ριοι καὶ ἀπὸ πλαγίων πλάγιοι.  
 δέον εἰπεῖν ὅτι εἰσὶ καὶ μέσοι δέον εἰπεῖν, ὅτι εἰσὶ καὶ μέσοι  
 μέσων καὶ φθοραὶ φθορῶν· καὶ μέσων, καὶ φθοραὶ φθ[ορῶ]ν· καὶ  
 5 πάλιν κύριοι ἄλλοι καὶ πλάγιοι πάλιν κύριοι ἄλλοι, καὶ πλάγιοι  
 ἄλλοι· καὶ πάλιν κύριοι κυρίων [ἄλλοι]· καὶ πάλιν κύριοι κυρίων,  
 καὶ πλάγιοι πλαγίων καὶ φθοραὶ καὶ πλάγιοι πλαγίων καὶ φθοραὶ

φθορῶν καὶ μέσοι μέσων. οὔτινες  
οὐκ εἰσὶν ἀναγκαίων - οἷον εὐρι-  
10 σκόμενοι ἔν τινι ὀργάνῳ ἀδό-  
μενοι - ἀλλὰ κατὰ ἀντιστροφὴν  
τῶν πρώτων καὶ ἀναμφιβόλων, ὧν  
τὸ χρήσιμον ἢ ἐν τούτῳ μόνον  
ἔρευνα καὶ σαφήνεια.

φθορῶν· καὶ μέσοι μέσων οὔτινες  
οὐκ εἰσὶν ἀναγκαίων οἷον εὐρι-  
σκόμενοι ἔν τινι ὀργάνῳ ἀδό-  
μενοι· ἀλλὰ κατὰ ἀντιστροφὴν  
τῶν πρώτων καὶ ἀναμφιβόλων· ὧν  
τὸ χρήσιμον, ἢ ἐν τούτῳ μόνον  
εὐρεῦνα καὶ σαφήνεια·

4 et 6 lacunas suppleuit Høeg 9 ἀναγκαίων] ἀναγκαῖοι vel τῶν ἀναγκαίων  
legendum? οἷον per compendium scripsit P ( οἷ ), οἷ Høeg et Perne  
14 εὐρεῦνα P

#### TRANSLATION:

37. Since there are "Kyrioi from Kyrioi" and "Plagioi from Plagioi", we have to say that there are also "Mesoi of Mesoi" and "Phthorai of Phthorai". And then other Kyrioi and other Plagioi, and once more "Kyrioi of Kyrioi" and "Plagioi of Plagioi" and "Phthorai of Phthorai" and "Mesoi of Mesoi". These, however, do not belong to the necessary ones, being found (only) when the song is accompanied by some instrument(?), but (they occur) as counterparts (?) to the first and unambiguous ones, the usefulness of which is the only subject-matter of the inquiry and explanations of the present treatise.

#### NOTES:

- \* 1. The text of 8-11 is probably corrupt. Its general meaning may be that the subtleties described in 4fin-8 are not actually found in purely vocal music (i.e. Ecclesiastical), but only when the singing is connected with instrumental music (i.e. folk-music?).
- \* 2. The exact meaning of κατὰ ἀντιστροφὴν (11) eludes me. See below, ad §§41-42.
- \* 3. My rendering of 12fin-14 presupposes that ὧν refers to τῶν πρώτων καὶ ἀναμφιβόλων (12). If the pronoun refers to οὔτινες (8), the comma after ἀναμφιβόλων should be changed into a semicolon. The text would then mean that the subtleties of 4fin-8 are only adduced for theoretical and clarifying purposes. In both cases, the placing of the adverb μόνον is strange.

38. Ἡδη δὲ καὶ διὰ διαγραφῆς P: ἥδη δὲ καὶ διὰ τὰ γραφῆς  
τοῦτο σαφὲς παραστήσομεν. 10ν τοῦτο σαφὲς παραστήσομεν· |

α	β	γ	δ
α	υ	γ	δ

πγ	πγ	ωφ	πδ
πγ	πγ	ωφ	πδ

1 διαγραφῆς coniecit Ebbesen, τὰ γραφῆς P (ut videtur), τὸ γραφῆς Perne (sed de υ γρα dubitavit), τ[ῆς γρα]φῆς Høeg

#### TRANSLATION:

38. We shall now make this clear by means of diagrams.

- \* 1. This paragraph serves as an announcement of §§39-44. As long as the diagrams of §§39-44 have not been analysed in details, it is not easy to define the exact function of the two diagrams of §38. It is to be noted, however, that the diagrams of §38 have no heading of their own, corresponding to what we find in the following paragraphs.
- \* 2. Ebbesen's conjecture is not entirely satisfactory, in so far as it is difficult to find a palæographically convincing explanation for the reading of P.

39. Τοῦ  $\bar{g}$  φθορῶν φθοραὶ ἀνιοῦσαι καὶ κατιοῦσαι·

u <sup>h</sup>	h <sup>h</sup>	h <sup>h</sup>	γ	ρ	δ
h <sup>h</sup>	u <sup>h</sup>	u <sup>h</sup>	ρ	g	ρ

Τοῦ  $\bar{B}$  φθορῶν φθοραὶ ἀνιοῦσαι καὶ κατιοῦσαι·

5

h <sup>h</sup>	h <sup>h</sup>	u <sup>h</sup>	ρ	δ	g
h <sup>h</sup>	h <sup>h</sup>	h <sup>h</sup>	δ	γ	δ

Τοῦ  $\bar{r}$  φθορῶν φθοραὶ ἀνιοῦσαι καὶ κατιοῦσαι·

h <sup>h</sup>	h <sup>h</sup>	h <sup>h</sup>	δ	g	γ
h <sup>h</sup>	u <sup>h</sup>	h <sup>h</sup>	g	ρ	g

10

Τοῦ  $\bar{\delta}$  φθορῶν φθοραὶ ἀνιοῦσαι καὶ κατιοῦσαι·

u <sup>h</sup>	h <sup>h</sup>	h <sup>h</sup>	g	γ	ρ
h <sup>h</sup>	h <sup>h</sup>	h <sup>h</sup>	γ	δ	γ

9 g scripsi, γ P

NOTES: See below, after §44.

40. Τ[οῦ]  $\bar{g}$  μέσοι μέσων·

u <sup>h</sup>	[h <sup>h</sup> ]	[ρ]
h <sup>h</sup>	h <sup>h</sup>	[g]

Τοῦ  $\bar{y}$  μέσοι μέσων·

5

h <sup>h</sup>	h <sup>h</sup>	δ
h <sup>h</sup>	h <sup>h</sup>	u

Τοῦ  $\bar{r}$  μέσοι μέσων·

h <sup>h</sup>	u <sup>h</sup>	g
u <sup>h</sup>	u <sup>h</sup>	ρ

10

Τοῦ  $\bar{\delta}$  μέσοι μέσων·

h <sup>h</sup>	h <sup>h</sup>	g
h <sup>h</sup>	h <sup>h</sup>	δ

1 του  $\bar{g}$  adhuc vidit Perne    2 u<sup>h</sup> et 3 h<sup>h</sup> h<sup>h</sup> vidit Perne  
2 h<sup>h</sup> et ρ et 3 g e linn 5-12 conieci

NOTES: See below, after §44.

41. Οἱ κατ'ἀντιστροφῶν τῶν πρώτων καὶ ἀναμφιβόλων πλάγιοι κυρίων·

$\hat{\pi}a$	$\hat{\pi}b$	$\hat{\pi}c$	$\hat{\pi}d$
$\hat{\pi}g$	$\hat{\pi}b'$	$\hat{\pi}c'$	$\hat{\pi}d'$

NOTES: See below, after §44.

42. Οἱ κατ'ἀντιστροφῶν τῶν πρώτων καὶ ἀναμφιβόλων κύριοι πλαγίων·

a	u	r	d
a	u	r	z

1 κύριοι πλαγίων conieci, κυρίων πλάγιοι P

NOTES: See below, after §44.

43. Τοῦ  $\bar{g}$  φθοραὶ φθορῶν ἀνιοῦσαι [καὶ κατι]οῦσαι·

d	r	u	$\hat{\pi}y$	$\hat{\pi}c$	$\hat{\pi}d$
r	a	r	$\hat{\pi}c'$	$\hat{\pi}g$	$\hat{\pi}c'$

11r

Τοῦ δευτέρου φθοραὶ φθορῶν ἀνιοῦσαι καὶ κατιοῦσαι·

a	z	r	$\hat{\pi}c'$	$\hat{\pi}d$	$\hat{\pi}a$
d	u	d	$\hat{\pi}d$	$\hat{\pi}b$	$\hat{\pi}d$

Τοῦ  $\bar{r}$  φθοραὶ φθορῶν ἀνιοῦσαι καὶ κατιοῦσαι·

u	a	d	$\hat{\pi}d$	$\hat{\pi}a$	$\hat{\pi}b$
a	r	a	$\hat{\pi}g$	$\hat{\pi}c'$	$\hat{\pi}g$

10 Τοῦ  $\bar{z}$  φθοραὶ φθορῶν ἀνιοῦσαι καὶ κατιοῦσαι·

r	u	a	$\hat{\pi}a$	$\hat{\pi}y$	$\hat{\pi}c'$
u	d	u	$\hat{\pi}b$	$\hat{\pi}d$	$\hat{\pi}y$

1 καὶ κατιοῦσαι adhuc vidit Perne

NOTES: See below, after §44.

44. Τοῦ πρώτου μέσοι μέσων ἀνιοῦσαι καὶ κατιοῦσαι·

r	g	$\hat{\pi}c'$
g	g	$\hat{\pi}g$

Τοῦ  $\bar{u}$  μέσοι μέσων ἀνιοῦσαι καὶ κατιοῦσαι·

d	u	$\hat{\pi}[d]$
u	u	$[\hat{\pi}y]$

Τοῦ  $\bar{r}$  μέσοι μέσων ἀνιοῦσαι καὶ κατιοῦσαι·

a	r	$\hat{\pi}a$
r	r	$\hat{\pi}c'$

10 τοῦ δ̄ μέσοι μέσων ἀνλοῦσαι καὶ κατλοῦσαι.

g	δ	πγ
Δ	Δ	πδ

5-6 lacunas suppleui

11 g P, an γ legendum?

# NOTES:

- \* 1. Several of the diagrams in these paragraphs have been physically damaged, but the missing modal signatures can be safely restored from the context.
- \* 2. Together with §38 the diagrams are evidently intended to depict what was said in §37. As already mentioned (notes, p. ) §37 is probably corrupt and partly incomprehensible. The diagrams are not very helpful to clear up the problems, since we do not know how they were to be read and used, and since their headlines contain several obscure details. All which can be done at present is therefore to make a list of the main obscurities - see below, notes 5-7.
- \* 3. Johannes Tzetzes, *Über die altgriechische Musik in der griechischen Kirche*, München 1874, pp. 67-71 combines *verbatim* quotations of §§36-37 with surveys of the modes κατὰ δικάζουξιν and κατὰ συναφῆν in such a way that it does not become clear that the latter are not taken from §§39-44 of the Hagiopolites.
- \* 4. According to their headings, the diagrams deal in turn with the following situations:  
 §39: Phthorai of Phthorai, upwards and downwards, for each of the four authentic modes.  
 §40: Mesoi of Mesoi for each of the four authentic modes.  
 §41: The Plagioi of Kyrioi, "as counterparts to the first and unambiguous ones".  
 §42: The Kyrioi of Plagioi (but P reads "Plagioi of Kyrioi!"), "as counterparts to the first and unambiguous ones".  
 §43: Phthorai of Phthorai, upwards and downwards, for each of the four authentic modes.  
 §44: Mesoi of Mesoi for each of the four authentic modes, upwards and downwards.  
 NB. The arrangement is not exactly the same as that of §37.
- \* 5. In the headings of §§39, 43, and 44, the expression ἀνλοῦσαι καὶ κατλοῦσαι seems to refer to the relative position of the modes; cf. below, §§51-54 *passim*. The notion is well known from later theory (see, e.g., Tardo pp. 158 and 160-63). But how is this to be understood in connection with the diagrams of §§39-44?
- \* 6. What is the difference between τοῦ πρώτου φθορῶν φθοραὶ etc. in §39 and τοῦ πρώτου φθοραὶ φθορῶν etc. in §43? Similar question as to §§40 and 44.
- \* 7. In §§41 and 42 the headings use expressions similar to §37,9-10. Are the differences to be explained as scribal errors, or are they intentional?
- \* 8. In §44, the feminine participles are strange; for the Middle Modes are always masculine (ἡχος μέσος πρώτος etc.). The recurrent abbreviation in the headings of P (μγ) offers no help.

XIII 45. Ταῦτα μὲν οὖν παρεκβατικώ-  
 τερων εἴπομεν. καὶ ὅσον οὐ καθ' 11v  
 εἰρμόν διδασκαλίας πολὺν τὸν  
 λόγον μηδὲ συνεχῇ ποιησάμενοι,  
 5 νῦν πρὸς τοῖς ἀπολειφθεῖσιν τι-  
 θέαμεν (ὅθεν ἄνωθεν τοῦ καθ'  
 εἰρμόν λέγειν ἐπαυσάμεθα) καὶ  
 τὰ ἐπίλοιπα. λέγομεν τοίνυν  
 περὶ ἐνηχημάτων καὶ ἐπηχημάτων.  
 10 καὶ ἐνηχήματα μὲν εἰσιν αἱ τῶν  
 ἤχων ἐπιβολαί· ἐπηχήματα δὲ ἡ  
 προσθήκη τοῦ ἐνηχήματος, καὶ  
 κατιοῦσα καὶ συναρμοζομένη τῷ  
 φθόγγῳ τοῦ μέλλοντος προενεχ-  
 15 θῆναι εἰς τὴν ψαλμωδίαν - ὡς  
 ὅταν μετὰ τὸ ἐνήχημα λέγεται  
 ναὶ λέγε καὶ ναὶ ἄγιε νανά καὶ  
 ὅσα τούτοις ὅμοια.

P: Ταῦτα μὲν οὖν παρεκβατικώ-  
 11v τερων εἴπομεν· καὶ ὅσον οὐ καθ'  
 εἰρμόν διδασκαλίας· πολὺν τὸν  
 λόγον· μὴ δὲ συνεχῇ ποιησάμενοι,  
 νῦν πρὸς τοῖς ἀπολειφθεῖσιν τι-  
 θέαμεν· ὅθεν ἄνωθεν τοῦ καθ'-  
 εἰρμόν λέγειν ἐπαυσάμεθα· καὶ  
 τὰ ἐπίλοιπα· λέγομεν τοίνυν  
 περὶ ἐνηχημάτων καὶ ἐπιχημάτων·  
 καὶ ἐνηχήματα μὲν εἰσιν, αἱ τῶν  
 ἤχων ἐπιβολαί· ἐπηχήματα δὲ ἡ  
 προσθήκη τοῦ ἐνηχήματος· καὶ  
 κατιοῦσα καὶ συναρμοζομένη· τῷ  
 φθόγγῳ τοῦ μέλλοντος, προενεχ-  
 θῆνα[ι εἰς τὴν ψ]αλμωδίαν· ὡς  
 ὅταν μετὰ τὸ ἐνήχημα λέ[γεται]  
 ναὶλέγε· καὶ ναὶ ἄγιενανά καὶ  
 ὅσα τούτοις ὅμοια·

4 λογον P, accentum addidit rubricator  
 adnot 16 lacunam suppleuit Høeg (sed fortasse melius λέγομεν legendum)  
 17 νανάμ P (i.e. ναναὶ ante correcturam, νανά post corr ?), νανάθ Perne  
 ναναὶ Høeg

15 lacunam suppleuit Høeg, vide

#### TRANSLATION:

45: The above was a kind of digression, and we have used much space on matters which do not systematically belong at this place. To the point where we stopped our systematic description we now add what remains. Let us, then, take up Enechemata and Epechemata: Enechemata are the intoning of the Echoi, Epechemata are the addition to the Enechema, descending and being adapted to the melody which is to be sung in the psalmody - e. g. as when we after the Enechema sing *ne lege*, *neagie nana*, etc.

#### NOTES:

- \* 1. The ὅθεν-clause in 6-7 is awkwardly placed, between τιθέαμεν and its object; I may have misconstrued the meaning.
- \* 2. The terminological problem of ἐπιβολαί (11) is still unsettled. In my "Intonation Formulas..." p. 44, I suggested that the earlier expression was ὑποβολή. This, however, does not automatically imply that the reading of P is a mistake of the copyist's. But see above, §§6,13 7,2 and 33,12.
- \* 3. Κατιοῦσα in 13 is somewhat surprising, in so far as one of the examples adduced is the Nana of Plagios Tetartos - where the Nana lies on a higher pitch than the intonation word Neagie

( νε α γι ε να να )  
G a G G c c

Has something fallen out, e.g. <ἀντιοῦσα ἦ> καὶ κατιοῦσα?

- \* 4. Høeg's text in line 15 is not the only way in which the lacuna might be filled out. Equally possible is μετὰ τὴν ψαλμωδίαν, as suggested by Ebbesen; this reading would refer to performances where an intonation was added to the ending of the Psalm verse, to facilitate the transition to a following Sticheron. My earlier attempt ("Intonation Formulas...", p.43) can hardly be upheld; I imagined that συναρμοζομένη τῇ φθόγγῃ τοῦ μέλλοντος προενεχθῆναι τὴν ψαλμωδίαν could convey the meaning of "being adapted to the sound of the chanter who was going to sing the psalmody".
- \* 5. Φθόγγος may be the initial sound of the melody, or a more vague expression.
- \* 6. For ἐνήχημαν (16), see §14, note 3.

46. Ἐπεὶ δὲ καὶ κοινωνίαν οἱ ἦχοι κέκτηνται πρὸς ἀλλήλους θαυμαστὴν ἐν ταῖς ὑποβολαῖς τῶν φθόγγων αὐτῶν, διὰ τοῦτο	P: ἐπεὶ δὲ καὶ κοινωνίαν οἱ ἦχοι κέκτηνται πρὸς ἀλλήλους θαυμαστὴν ἐν ταῖς ὑποβολαῖς τῶν φθόγγων αὐτῶν· διατοῦτο
5 καὶ τὰ αὐτὰ δυσωποῦσιν ἅπαν- τες ἐν ταῖς ἑαυτῶν ἐκφωνήσεσιν. ὅτι δὲ τοῦτο οὕτως ἔχει, δῆλον ἐντεῦθεν·	καὶ τὰ αὐτὰ δυσωποῦσιν ἅπαν- τες ἐν ταῖς ἑαυτῶν ἐκφωνήσεσιν· ὅτι δὲ τοῦτο οὕτως ἔχει, δῆλον ἐντεῦθεν·

#### TRANSLATION:

46. The Echoi have also a marvellous kinship to each other "in the Hypobolai of their Phthongoi". This is the reason why all of them ... the same "in their Ekphoneseis". The following shows that this is really so. The following shows that this is really so.

#### NOTES:

- \* 1. The θαυμαστὴ κοινωνία of the Echoi is shown in §§47-54, cf. the concluding remark at the beginning of §55. In §§52-54 (and 29) συγγένεια is used as a synonym.
- \* 2. I hesitate to translate ὑποβολαί, φθόγγος, and ἐκφωνήσεις, the more so since the crux in line 5 makes it impossible to get a clear idea of the line of thought in this paragraph.
- \* 3. If the text were correct in 4-6, ἅπαντες ought to be singers, not Echoi; for δυσωπεῖν is usually said of persons.

47. Ὁ πρῶτος ἦχος πέντε φωνὰς ἔχει ἐνήχημα. ἀπὸ γοῦν τῆς ὑπο- ροφῆς τῆς δευτέρας αὐτοῦ φωνῆς	P: ὁ πρῶτος ἦχος πέντε φωνὰς ἔχει ἐνήχημα· ἀπὸ γοῦν τῆς ὑπο- 12r ροφῆς [τῆς] δευτέρας αὐτοῦ φωνῆς,
--	--

αἱ ἐφεξῆς τρεῖς φωναὶ συναπτό-  
 5 μιν αὐτῇ - ἡγουν τῇ δευτέρᾳ  
 - τὸν ὑφειμένον πρῶτον ἀποτελ-  
 οῦσιν ἦχον, ὃν πα' λέγομεν· ἡ  
 δὲ τρίτη αὐτοῦ φωνὴ συνεπιλαμ-  
 βανομένη καὶ τὰς ἐφεξῆς δύο  
 10 τὸν δεύτερον ἦχον ἀποτελεῖ, ὡς  
 εἶναι τὸν πρῶτον ἦχον κατὰ τε  
 τὸν τρόπον γεννητὸν τοῦ δευτέ-  
 ρου ἦχου καὶ τοῦ πα'· ἡ γὰρ μέ-  
 ση αὐτῶν φωνῇ κοινὴ ἐστὶν ἀμφο-  
 15 τέροις.

αἱ ἐφεξῆς τρεῖς φωναὶ συναπτό-  
 μιναι, αὕτη ἡγουν τῇ δευτέρᾳ  
 τὸν ὑφειμένον πρῶτον ἀποτελ-  
 οῦσιν ἦχον· ὃν πα' λέγομεν· ἡ  
 δὲ τρίτη αὐτοῦ φωνὴ συνεπιλαμ-  
 βανομένη καὶ τὰς ἐφεξῆς δύο,  
 τὸν δεύτερον ἦχον ἀποτελεῖ· ὡς  
 εἶναι τὸν πρῶτον ἦχον κατὰ τε  
 τὸν τρόπον, γεννητὸς τοῦ δευτέ-  
 ρου ἦχου καὶ τοῦ πα'· ἡ γὰρ μέ-  
 ση αὐτῶν φωνῇ, κοινὴ ἐστὶν ἀμφο-  
 τέροις·

5 αὐτῇ Ebbesen, αὕτη P, ταύτη olim conieci 7 πα' in rasura P (crucem  
 sub ὃν posuit altera manus) 10-11 ὥστε εἶναι olim conieci, ὡς εἶναι P  
 11 τε P, an τοῦτον legendum? 12 γεννητὸν conieci, γεννητὸς P 14 αὐτοῦ  
 legendum?

#### TRANSLATION:

47. The First Echos has five steps as Enechema (a G F E D). The three steps which follow in downward stepwise movement upon the second of these (F E D, following after G) constitute the inferior First Echos - the one which we call Plagios Protos. The third of its steps (F), when combined with the following two (G a), constitutes the Second Echos (F G a). The First Echos is thus a child of Deuterios and Plagios Protos, their (or its) middle step being common to both.

#### Notes:

- \* 1. For §§47-50, see my "Intonation Formulas....", pp.40-41. As pointed out (*ibid.*p.43) ἦχος at times seems to refer to the Enechema rather than to the mode; in the present paragraph, only the occurrence in line 1 must refer to the mode.
- \* 2. For the derivation of Plagios Protos (2-7), cf. §6,4-6.
- \* 3. The description of the Deuterios ἦχος (i.e. intonation) in 7-10 and 13-15 is more problematic than I realized twenty years ago. At the time I was convinced that the intonation of Deuterios (in its "normal" position) was b a G, here transposed to a G F. But since the exclusively diatonic character of the Deuterios seems now to be far less likely than it used to be, we cannot exclude the possibility that the three tones mentioned in 8-9 are F G-flat a (with intervals as E F G-sharp, the lower trichord of the chromatic Deuterios).
- \* 4. Ἡ μέση φωνή (13-14) must be F, correctly said to be κοινὴ ἀμφοτέροις. But this note can only be called "their middle step", if "middle" refers to the borderline between these two modes or intonations. Evidently, then, either the author has made a tautology or the scribe an error; in the latter case, αὐτῶν should be changed into αὐτοῦ (= τοῦ πρῶτου ἦχου).

48. Ἐκ πέντε φωνῶν τοίνυν ὁ  
 πρῶτος ἤχος ἐστίν. ὁ δὲ δεύτε-  
 ρος ἤχος ἔχει φωνὰς τρεῖς· καὶ  
 ἐκ τῆς δευτέρας αὐτοῦ φωνῆς ὁ  
 5 πλαγιδεύτερος ἤχος ἀπογεννᾶται  
 κάκεῖθεν συνίσταται, πλὴν μετὰ  
 τοῦ ἐνηχήματος. εἰ μὲν γὰρ οὕ-  
 τως ἐνηχηθῇ, <sup>λ</sup>πα' ἤχος εἰσάγε-  
 ται, διότι πολλὴν κοινωνίαν  
 10 ἔχουσι πρὸς ἀλλήλους ὁ <sup>λ</sup>πα' καὶ  
 ὁ <sup>λ</sup>πβ' ὥσπερ καὶ ὁ πρῶτος μετὰ  
 τοῦ δευτέρου. ὥς ἐπὶ τὸ πλεῖ-  
 στον δὲ τὰ πληρώματα καὶ αἱ  
 ἀποθέσεις τοῦ δευτέρου ἤχου  
 15 εἰς ἤχον <sup>λ</sup>πβ' ἀποδίδονται.

P: Ἐκ πέντε φωνῶν τοίνυν ὁ  
 πρῶτος ἤχος ἐστίν· ὁ δὲ δεύτε-  
 ρος ἤχος ἔχει φωνὰς τρεῖς· καὶ  
 ἐκ τῆς δευτέρας αὐτοῦ φωνῆς, ὁ  
 πλάγει δεύτερος ἤχος ἀπογε[ννα]ται  
 κάκεῖθεν συνίσταται· πλὴν μετὰ  
 τοῦ ἐν[ηχήμ]ατος εἰ μὲν γὰρ οὕ-  
 τως ἐνηχηθῇ· <sup>λ</sup>πg ἤχος εἰσάγε-  
 ται· διότι πολλὴν κοινωνίαν  
 ἔχουσι πρὸς ἀλλήλους ὁ <sup>λ</sup>πα' καὶ  
 ὁ <sup>λ</sup>πβ' ὥσπερ καὶ ὁ πρῶτος μετὰ  
 τοῦ δευτέρου· ὥς ἐπὶ τὸ πλεῖ-  
 στον δὲ τὰ πληρώματα καὶ αἱ  
 ἀποθέσεις τοῦ δευτέρου ἤχου,  
 εἰς ἤχον <sup>λ</sup>πβ' ἀποδίδονται.

5 πλάγει δεύτερος P, fortasse melius in πλαγιοδεύτερος corrigendum (cf. § 35 passim) ἀποτίκτεται olim conieci sed γ vidit Høeg et vestigia litterarum γε imago codicis praebet (ε postea plane deperditum est), unde ἀπογεννᾶται legendum 7-9 vide annotationem

#### TRANSLATION:

48. The First Echos, then, consists of five notes. The Second Echos has three notes (viz. as *Enechema*: b a G). From the second of these the Plagios Deuterios is born, and it is from this note (i.e. from a) that it is organized, but only in connection with its appropriate Enechema; for if it has no such Enechema, this pitch will lead to Plagios Protos - since Plagios Protos and Plagios Deuterios have much in common, as have also Protos and Deuterios. The cadences and endings of the Second Echos are usually those of Plagios Deuterios.

#### NOTES:

- \* 1. The Epsilon of ἐνηχήματος (7) has the shape used in the ligature εν; otherwise it would have been tempting to read ἐπηχήματος and take this to refer to the Nenano (on a). If the transmitted text is sound, it would imply that the author speaks of a "transposed" Plagios Deuterios intonation (a b-flat c-sharp b-flat a?). The unspecified τοῦ ἐνηχήματος is to be observed; did the model MS perhaps read μετὰ τοῦ ἐαυτοῦ ἐνηχήματος?
- \* 2. In 7-9 a negation seems to be missing. Possible reading would be εἰ μὴ γὰρ οὕτως ἐνηχηθῇ (but this word order is strange; we would expect εἰ γὰρ μὴ) or εἰ μὲν γὰρ <οὐχ> οὕτως ἐνηχηθῇ.
- \* 3. For lines 12-15, see §6,9-11.

49. Ὁ δὲ τρίτος ἔξ φωνὰς ἔχει, P: ὁ δὲ τρίτος ἔξ φωνὰς ἔχει  
καὶ ἐκ τῆς τελευταίας αὐτοῦ φωνῆς, ὁ βαρὺς ἀπάρχεται καὶ ἐκ τῆς τελευταί[ας] αὐτοῦ φωνῆς, ὁ βαρὺς ἀπάρχεται

## TRANSLATION:

49. The Third Echōs "has six notes", and the Barys takes its beginning from the last of these.

## NOTES:

- \* 1. I have formerly suggested that this was a description of *ambitus* rather than of an intonation formula ("Intonation Formulas...", p. 41). However, if one considers the author's predilection for *variatio sermonis*, there can be little doubt that the beginning of §49 should be understood like those of §§47, 48, and 50, i.e. as references to Enechemata.
- \* 2. The αὐτοῦ (2) must refer to the ἦχος - in the sense of Enechema. How Barys can be said to "begin from the last note of the Tritos Enechema" is still unclear to me.

50. Ὁ δὲ τέταρτος ἐκ πέντε φωνῶν ἔχει τὴν σύστασιν· ἔξ ὧν τῆς πρώτης καὶ ἐπιτεταμένης ἀφαιρεθείσης ὁ μέσος τέταρτος γίνεταί· μέσος δὲ λέγεται διὰ τὸ ἐν μεταχλίῳ εἶναι. καὶ ὡς μεσιτεύει ἐν τῇ τετάρτῃ ἡχῷ καὶ τῇ πρῶτῃ ὁ μέσος τέταρτος, οὕτω καὶ ἐν τοῖς λοιποῖς.

P: ὁ δὲ τέταρτος ἐκ πέντε φωνῶν ἔχει τὴν σύστασιν· ἔξ ὧν τῆς πρώτης καὶ ἐπιτεταμένης ἀφαιρεθείσης, ὁ μέσος τέταρτος γίνεταί· μέσος δὲ λέγεται, διὰ τὸ ἐν μετεχλίῳ εἶναι· καὶ ὡς μεσιτεύει ἐν τῇ τετάρτῃ ἡχῷ καὶ τῇ πρῶτῃ ὁ μέσος τέταρτος, οὕτω καὶ ἐν τοῖς λοιποῖς.

3 ἐπιτεταμένης conieci, ἐπιτετραμένης P 6 μεταχλίῳ coniecit Ebbesen, μετεχλίῳ P

## TRANSLATION:

50. The Tetartos consists of five notes. If the first and highest of these is removed, the result is Mesos Tetartos - called Mesos because it is placed in between. Parallels are also found in the other modes, corresponding to the place of Mesos Tetartos between Tetartos and Plagios Tetartos.

## NOTES:

- \* 1. Ὁ τέταρτος (scil. ἦχος) must be the Enechema (d c b a G).
- \* 2. Ἐπιτεταμένη (3) seems to be a *terminus technicus* of Ancient musical theory.

51. Ἐχουσι τοίνυν καὶ οἱ τέσσαρες κύριοι κοινωνίαν πρὸς P: Ἐχουσι τοίνυν καὶ οἱ τέσσαρες κύριοι, κοινωνίαν πρὸς

ἀλλήλους ἀπὸ τῶν πλαγίων αὐτῶν,  
ἀλλὰ δὴ καὶ ἀπὸ τῶν φθορῶν αὐ-  
5 τῶν. μίαν γὰρ φωνὴν ἀπὸ τοῦ  
πρώτου ἀναβιβάζοντες, τὸν κύ-  
ριον δεύτερον εὐρίσκομεν· καὶ  
πάλιν ἀπὸ τοῦ δευτέρου μίαν φω-  
νὴν καταβιβάζοντες, τὸν πα' εὐ-  
10 ρίσκομεν. οὕτως τοίνυν ἐστὶν  
εὐρεῖν καὶ ἐπὶ τῶν ἄλλων τριῶν  
ῥήχων.

ἀλλήλους, ἀπὸ τῶν πλαγίων αὐτῶν,  
ἀλλὰ δὴ καὶ ἀπὸ τῶν φθορῶν αὐ-  
τῶν· μίαν γὰρ φωνὴν ἀπὸ τοῦ  
πρώτου ἀναβιβάζοντες, τὸν κύ-  
ριον δεύτερον εὐρίσκομεν· [καὶ]  
πάλιν ἀπὸ τοῦ δευτέρου μίαν φω-  
νὴν καταβ[ιβάζο]ντες, τὸν πα' εὐ-  
ρίσκομεν· οὕτως τοίνυν ἐστὶν  
εὐρεῖν καὶ ἐπὶ τῶν ἄλλων τριῶν  
ῥήχων·

3 οὐ μόνον ante ἀπὸ excidisse suspicatus est Hæg 7 lacunam suppleui  
9 lacunam suppleui

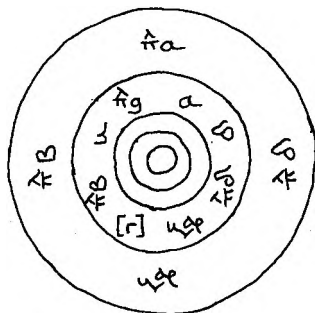
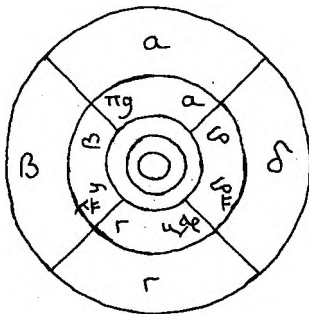
#### TRANSLATION:

51. Furthermore, the four authentic Echoi are also mutually akin from their Plagals - and from their Phthorai as well. For if from the Protos we ascend one step, we find the authentic Deuterios; if we descend one step from the Deuterios, we find the Plagios Protos. Concerning the three other Echoi the situation is the same.

#### NOTES:

- \* 1. The καὶ in line 1 must be construed with ἀπὸ τῶν πλαγίων αὐτῶν.
- \* 2. In lines 6 and 9 ἀναβιβάζοντες and καταβιβάζοντες are used instead of the simple, non-causal forms.

#### XIV 52.



Ὅτε τοίνυν μέλλεις δεικνύειν  
ἀπὸ τῶν κυρίων πρὸς τοὺς κυ-  
ρίους τὴν συγγένειαν, κατ'εὐ-  
θεῖαν ἀνέλθῃς, πρῶτον καὶ δεύ-

P: ὅτε τοίνυν μέλλεις δεικνύειν  
ἀπὸ τῶν κυρίων πρὸς τοὺς κύ-  
13r ρίους:-|τὴν συγγένειαν, κατ'εὐ-  
θεῖαν ἀνέλθῃς· πρῶτον καὶ δεύ-

5 τερον καὶ τρίτον καὶ τέταρτον  
 ἀριθμῶν· ὅτε δὲ τὴν αὐτὴν συγ-  
 γένειαν τῶν αὐτῶν ἤχων μέλλεις  
 δεικνύειν οὐκ ἀπ' αὐτῶν τῶν κυ-  
 ρίων ἀλλ' ἀπὸ τῶν πλαγίων αὐτῶν,  
 10 τότε τὸ ἀνάπαλιν ποιήσης, τοὺς  
 κυρίους ἀπὸ τοῦ τετάρτου ἕως  
 τοῦ πρώτου κατερχόμενος, τέταρ-  
 τον καὶ τρίτον καὶ δεύτερον καὶ  
 πρῶτον ἀριθμῶν.


τερον καὶ τρίτον, καὶ τέταρτον  
 ἀριθμόν· ὅτε δὲ τὴν αὐτὴν συγ-  
 γένειαν τῶν αὐτῶν ἤχων μέλλεις  
 δεικνύειν· οὐκ ἀπ' αὐτῶν τῶν κυ-  
 ρίων, ἀλλ' ἀπὸ τῶν πλαγίων αὐτῶν,  
 τότε τὸ ἀνάπαλιν ποιήσεις τοὺς  
 κυρίους ἀπὸ τοῦ τετάρτου ἕως  
 τοῦ πρώτου κατερχόμενος· τέταρ-  
 τον καὶ τρίτον καὶ δεύτερον καὶ  
 πρῶτον ἀριθμόν·

2-3 post κυρίους initium paragraphi indicat P (distinctione plena et T  
 rubro colore depincta) 4 ἀνέλθης dubitanter scripsi, ἀνέλθεις P  
 6 ἀριθμῶν scripsi, ἀριθμόν P 10 ποιήσεις P 13 post τρίτον iterum  
 καὶ τρίτον habet P 14 ἀριθμόν P

#### TRANSLATION:

52. When you want to demonstrate the connection between the authentic Echoi, using these modes themselves for the demonstration, "go upwards in a straight line" while counting Protos, Deuterios, Tritos, Tetartos. But when you want to demonstrate the same connection between these Echoi - but using now not the authentic ones for the demonstration, but their Plagals - then do the opposite, counting the authentic Echoi in descent from the Fourth to the First, i.e. Tetartos, Tritos, Deuterios, Protos.

#### NOTES:

- \* 1. The two diagrams are written in the lower margin, immediately after πρὸς τοὺς κυρίους §52,2-3). There is no particular reason why the diagrams should have had exactly this position in the model of P; I have therefore placed them at the beginning of §52, since they seem to be meant as a basis for the developments of §§52-54. The two signatures at the lowest part of the diagrams (r and ) are now lost, but can be seen on old photographs.
- \* 2. The absurd lay-out in P (see app.crit. ad 2-3) would be more pardonable if the model MS were following the well-known device of marking the start of a section by means of letting the first full line of the new section begin with an enlarged (or coloured) letter protruding into the left hand margin. According to this hypothetical explanation, the beginning of §52 (ὅτε τοίνυν - κυρίους) was less than one complete line, and the model MS would have had either long lines and small letters or many abbreviations (or both).
- \* 3. If "going upwards in a straight line" (3-4) is to be taken literally, it is somewhat surprising to find κατ'εὐθεῖαν in connection with the circular movements dictated by the diagram! The same expression is used in §53,10-11.
- \* 4. My emendations of ἀνέλθεις and ποιήσεις (4 and 10) are not absolutely necessary. The choice between a rare usage of aorist subjunctive (as an imperative substitute) and a "future" form ἀνέλθεις may have been complete-

ly irrelevant both to the author and to the scribe of our MS. The pronunciation was the same, and there was no doubt as to the intended meaning.

- \* 5. Τοὺς κυρίους (10-11) is necessary, because the reader might otherwise be led to think that τὸ ἀνάπαλιν ποιήσης involved that it was now the Plagal Echoi which should be used in the "counting".

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53. Καὶ πάλιν, ὅτε τὴν συγγένει-	P: καὶ πάλιν ὅτε τὴν συγγένει-
αν τῶν πλαγίων πρὸς τοὺς πλαγί-	αν τῶν πλαγίων πρὸς τοὺς πλαγί-
ους ἀπὸ τῶν πλαγίων ποιῶμεν,	ους ἀπὸ τῶν πλαγίων ποιῶμεν,
ἀπὸ τὸν <sup>π</sup> α' ἀρχόμενοι καὶ κατ-	ἀπὸ τὸν <sup>π</sup> α' ἀρχόμενοι, καὶ κατ-
5 ἐρχόμενοι τὸν <sup>π</sup> δ' βαρ <sup>π</sup> β' καὶ	ἐρχόμενοι τὸν <sup>π</sup> δ' <del>α</del> <sup>π</sup> α καὶ
<sup>π</sup> α' δεῖξωμεν αὐτῶν τὴν συγγέ-	<sup>π</sup> α' δεῖξωμεν αὐτῶν τὴν[συγγέ-]
νειαν· ὅταν δὲ τὴν αὐτὴν τῶν	νειαν ὅταν δὲ τὴν αὐτὴν τῶν
αὐτῶν ἤχων συγγένειαν ποιῶμεθα,	αὐτῶν ἤχων συ[γγένει]αν ποιῶμεθα,
οὐκ ἀπ' αὐτῶν τῶν πλαγίων ἀλλ'	οὐκ ἀπ' αὐτῶν τῶν πλαγίων· ἀλλ'
10 ἀπὸ τῶν κυρίων αὐτῶν, κατ' εὐ-	ἀπὸ τῶν κυρίων αὐτῶν κατ' εὐ-
θεῖαν ἔλθωμεν, <sup>π</sup> α' <sup>π</sup> β' <βαρ>	θεῖαν ἔλθωμεν· <sup>π</sup> α' <sup>π</sup> β
καὶ <sup>π</sup> δ' ἀριθμοῦντες, ἀποδιδόν-	καὶ <sup>π</sup> δ' ἀριθμοῦντες, ἀποδιδόν-
τε <ς δὲ> ἐκάστῳ τῶν πλαγίων τὸν	τε ἐκάστῳ τῶν πλαγίων τὸν
κύριον ἤχον αὐτοῦ.	κύριον ἤχον αὐτοῦ·

6-7 συγγένειαν restitui    8 συγγενειαν adhuc vidit Perne    11 et 13  
suppleui

#### TRANSLATION:

53. And again, when we establish the connection between the Plagal Echoi, using the Plagals for this purpose, we begin from Plagios Protos and move downwards - Plagios Tetartos, Barys, Plagios Deuterios, and Plagios Protos - in the demonstration. But when we are to demonstrate the same connection, not from the Plagal Echoi themselves but from their authentic counterparts, we "go in a straight line", counting Plagios Protos, Plagios Deuterios, Barys, and Plagios Tetartos - but assigning to each of the Plagal its authentic Echos.

#### NOTES:

- \* 1. Ὅτε for ὅταν in 1, ἀπὸ + acc. in 4, δεῖξωμεν for δείξομεν in 6, ποιῶμεθα in 8 (but ποιῶμεν in 3) is a surprising number of suspect forms. I have left the text as it is, fearing that adjustments would be "corrections of the idiom of the author". One more place where the soundness of the text may be doubted is the construction of κατερχόμενοι in 4-5. Cf. also §52, note 4.
- \* 2. The meaning of 10-14 seems to be that in this upwards movement the authentic Echemata (ἤχοι) are used to denote the places of the Plagal modes. If this interpretation is correct, one might have expected a parallel remark at the end of §52.
-

54. Καὶ αὖθις τὴν συγγένειαν τῶν κυρίων ἡ<χων> ἀπὸ τῶν πλαγίων ποιούμενοι λέγομεν ὅτι οὐ διαφέρει ὁ πα' τοῦ α' κατὰ τὸν  
 5 τοῦ μέλους ῥυθμόν. πολλάκις γὰρ εὐρίσκεται πρῶτος ἀπὸ μέ- 13v γὰρ εὐρίσκεται πρῶτος ἀπὸ μέ-  
 λους· εἰ δέ ἐστιν ἡ φωνὴ κατ-  
 ιοῦσα, πλάγιος πρῶτος. πάλιν  
 εὐρίσκεται ἀπὸ μέλους πα'· εἰ  
 10 δέ ἐστιν ἡ φωνὴ ἀνιοῦσα, ἔστι  
 πρῶτος.

2 ἦχων restitui, ἦ P

#### TRANSLATION:

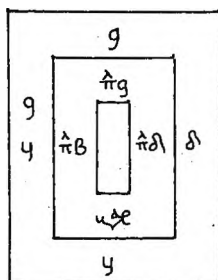
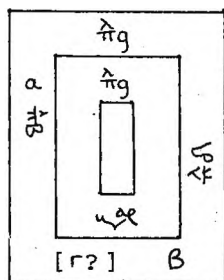
54. Once more a remark on the connection between the authentic Echoi as established from the Plagals: There is no difference between Plagios Protos and Protos from a melodic point of view. For many times the melodic movement is Protos; but if we have to do with a descending step, this is to be defined as Plagios Protos. And again, an ascending step will be Protos, although its melodic context is Plagios Protos.

#### NOTES:

- \* 1. I have paraphrased rather than translated, to make the line of thought a little more clear.  
 \* 2. 'Ο τοῦ μέλους ῥυθμός is probably a stylistic variation for τὸ μέλος. In §§52-54, the author's usual predilection for *variatio sermonis* is seen again and again.

55. Ἀλλὰ ταῦτα μὲν ἀρκεῖν μοι δοκοῦσιν, ὅσον πρὸς ἀπόδειξιν τῆς τῶν ἡχων θαυμαστῆς κοινωνί-  
 5 ας. εἰ δέ τις καὶ ἀκριβέστερον  
 περὶ τούτων ἐξετάσει, μυρίους  
 ἂν εὕρῃσι τρόπους τὴν τῶν ἡχων  
 κοινωνίαν συμβάλλοντας


10



οὐσπερ τέως παρήκαμεν, ἵνα μὴ  
πολυλογεῖν τισὶ δόξωμεν. ἔξεστι  
15 δὲ τοῖς φιλομαθέσιν, ὀδηγηθεῖσιν  
ἐξ ὧν ἐγεγράφευμεν. καὶ οὗς  
παρελίπομεν ἐφευρεῖν τρόπους,  
εἴπερ ἐμπόνως τούτοις ἐνασχολη-  
θεῖεν.

οὐσπερ τέως παρήκαμεν· ἵνα μὴ  
πολυλογεῖν τισὶ δόξωμεν· ἔξεστι  
δὲ τοῖς φιλομαθέσιν ὀδηγηθῆσιν  
ἐξ ὧν ἐγεγράφευμεν· καὶ οὗς  
παρελείπομεν ἐφευρεῖν τρόπους·  
εἴπερ ἐμπόνως τούτους ἐνασχολη-  
θεῖεν·:-

8-12 vide annotationem nostram

12. γ adhuc vidit Perne ( γ ) β] 

Perne

15, ὀδηγηθεῖσιν Ebbesen, ὀδηγηθῆσιν P


17 παρελείπομεν P

18 τούτους Ebbesen, τούτους P

#### TRANSLATION:

55. The above, I suppose, must be enough to demonstrate the marvellous kinship of the Echoi. However, if somebody makes an even more accurate scrutiny of these matters, he will find thousands of features which prove the kinship. At present I have disregarded these, to avoid being criticized for loquacity. But those who are eager after knowledge may be guided by what I have written to find also the features which I have passed by, provided they really do engage themselves in this troublesome work.

#### NOTES:

- \* 1. For the time being I have refrained from giving any precise translation of τρόπου in 6 and συμβάλλω in 7.
- \* 2. The two diagrams are written in the left and right margin respectively, and the text from μυρῖους in 5 to τισὶ in 14 has been written in very short lines, centred at the middle of the page so that the two diagrams do not protrude into the margins. The lay-out may have been taken over from the model MS.
- \* 3. In line 12, Perne apparently could still read both signatures of the left diagram. According to him, the first of these was a Tritos signature ( γ ); but since his rendering of the second signature (  ) bears no resemblance whatsoever to the clear β still preserved in P, I hesitate to believe his accuracy as far as the γ is concerned.
- \* 4. Anyhow, I have no idea as to how the two diagrams are to be understood.

- XV 56. Διαστημάτων εἰσὶ διαφοραὶ  
 πέντε· πρώτη μὲν, καθ' ἣν μεγέ-  
 θει διαφέρει· δευτέρα δέ, καθ'  
 ἣν τὰ μὲν σύμφωνα < >· τρίτη  
 5 δέ, καθ' ἣν τὰ μὲν ἐστὶ σύνθετα  
 τὰ δὲ ἀσύνθετα· τετάρτη δέ, καθ'  
 ἣν γέννη· πέμπτη, καθ' ἣν τὰ μὲν  
 ἐστὶ ῥητὰ τὰ δὲ ἄλογα.  
 = Anon § 58 (MSS:ABC)
- P: τῶν διαστημάτων εἰσὶ φωναὶ  
 πέντε· πρώτη μὲν καθ' ἣν μεγέ-  
θη διαφέρει· δευτέρον δὲ καθ'  
 ἣν τὰ μὲν σύμφωνα· τρίτη  
 δέ, καθ' ἣν τὰ μὲν ἐστὶ σύνθετα·  
 14x τὰ δὲ ἀσύνθετα· τετάρτη δέ, καθ'  
 ἣν γέννη· πέμπτη δὲ καθ' ἣν τὰ μὲν  
 ἐστὶ ῥητὰ, τὰ δὲ, ἄλογα

1 τῶν διαστημάτων P διαφοραὶ] φωναὶ P 2-3 μεγέθη P 3 δευτέρον P  
 4 σύμφωνα] + τὰ δὲ δῶφωνα Anon 5 εἰσὶ S 7 γένει Anon πέμπτη δὲ P  
 8 ῥήματα ante corr S

## NOTES:

- \* 1. Here begins the Ancient part of P. §§56-89 contain *Anonymus III Beller-manni*, §§33-69init., but in a confused order and without §§45fin.-49. The same text, but in correct order, is preserved in S, 92r-95v, including the paragraphs which are missing in P (Anon §§45-49). For details, see my article in *Texte und Untersuchungen zur Geschichte der altchristlichen Literatur*, Bd.125, quoted above (p. 2 note 2).
- \* 2. In P, §56 begins near the bottom of fol.13v, with a red initial letter. The lay-out does not indicate that we have to do with a text which has nothing whatsoever to do with the preceding. In S, the text of *Anonymus III*, §§ 33-69 begins on the top of 92r, with several lines in blank set aside for a heading.
- \* 3. For §§56-89, the left-hand columns give the corrupt text of the common ancestor of P and S, as far as this can be reconstructed. All deviations from Najock's text are underlined. The underlinings in the right-hand columns mark off the cases where P deviates from the reconstructed text, i.e. the private readings of P.

57. τῶν συμφώνων διαστημάτων - P: τῶν συμφώνων διαστημάτων,  
 ὁκτὼ ὄντων, ἀφ' ὧν τριῶν ἐλα- ὁκτὼ ὄντων, ἀφ' ὧν τριῶν ἐλα-  
 χίστων - τὸ μὲν διὰ τεσσάρων χίστων· τὸ μὲν διατεσσάρων,  
 διαιρεῖται εἰς σχήματα τρία, διαιρεῖται εἰς σχήματα ᾗ·  
 5 τὸ δὲ διὰ πέντε εἰς τέσσαρα, τὸ δὲ διαπέντε εἰς δ·  
 τὸ δὲ διὰ πασῶν εἰς ἑπτὰ. τὸ δὲ διαπασῶν, εἰς ἑπτὰ·  
 = Anon § 59 (MSS:ABC)

58. Τούτων δὲ τῶν < > τεσσά- P: τούτων δὲ τῶν τεσσά-  
 ρων σχημάτων πρῶτον μὲν, οὗ ρων σχημάτων, πρῶτον μὲν, οὗ

τὸ πυκνὸν ἐπὶ τὸ βαρὺ ἀπὸ ὑπ-  
 άτης μέσων ἐπὶ μέσον· δεύτερον  
 5 δέ, οὐ αἱ διέσεις ἐφ' ἐκάτερα  
 τοῦ διὰ τόνου ἀπὸ ὑπάτης μέσων  
 ἐπὶ τρίτην συνημμένων· τούτου  
 ἢ πρῶτον τὸ ἡμιτόνιον ἢ τέλος  
 ἢ μέσον. ἔστιν οὖν τὸ πυκνὸν  
 10 ἐπὶ τὸ ὀξύ, ἀπὸ λιχανοῦ μέσων  
 ἐναρμονίου ἐπὶ παρανήτην συνημ-  
 μένων ἐναρμόνιον.

= Anon § 60 (MSS:ABC)

τὸ πυκνὸν ἐπὶ τὸ βαρὺ ἀπὸ ὑπ-  
 άτης μέσης ἐπὶ μέσον· δεύτερον  
 δέ, οὐ αἱ δι' ἐκατέρου  
 τοῦ διατόνου· ἀπὸ ὑπάτης μέσον  
 ἐπὶ τρίτην· συνημμένων τούτου  
 ἢ πρῶτον τὸ ἡμιτόνιον, ἢ τέλος  
 ἢ μέσον· ἔστιν οὖν τὸ πυκνὸν  
 ἐπὶ τὸ ὀξύ· <

1-2 τούτων δὲ τῶν τεσσάρων σχημάτων P et S (om δέ), τοῦ δὲ τῶν διὰ τεσσάρων σχήματα AB  
 τοῦ δὲ διὰ τεσσάρων σχήματα C, τῶν δὲ τοῦ διὰ τεσσάρων σχημάτων Anon  
 (Bellermann) 2 οὐ] οὖν S 4 μέσων Anon, μέσον S, μέσης P μέσον PS,  
 μέσῃν Anon 5 διέσεις Anon, διάρσεις S, δι (sic) P ἐκατέρου P  
 6 παρυπάτης Anon μέσον P 7-8 τούτου ἢ PS, τρίτον δὲ οὐ Anon  
 8 πρῶτην S 10 ἀπὸ λιχανοῦ usque ad § 61,3 ἐπὶ τὸ ὀξύ om P μέσον S  
 11 ἐναρμόνιον S πανίτην S ante corr, παρανήτην post corr 11-12 συν-  
 ημμένον S

#### NOTES:

- \* 1. In line 5 the readings of P and S can be explained in different ways. Either διέσεις was difficult to read in their common ancestor; P gave up, whereas S (or rather the model of S, cf. Introduction p. ) produced a nonsensical διάρσεις. Or, if διάρσεις was already in the common ancestor, we might see the reading of P as being due to a prudent reluctance to copy a meaningless word.
- \* 2. The omission in P of lines 10 sqq. is due to *homoeoteleuton* (ἐπὶ τὸ ὀξύ).

59. Τῶν δὲ τοῦ διὰ πέντε σχη-  
 μάτων πρῶτον μὲν ἔστιν οὐ πρῶ-  
 τος ὁ τόνος ἐπὶ τὸ ὀξύ, ἀπὸ  
 ὑπάτης μέσων ἐπὶ παραμέσῃν·  
 5 δεύτερον δὲ οὐ δεύτερος ὁ τό-  
 νος ἐπὶ τὸ ὀξύ, ἀπὸ παρυπάτης  
 μέσων ἐπὶ τρίτην διεξευγμένων·  
 τρίτον δὲ οὐ < > ὁ τόνος ἐπὶ  
 τὸ ὀξύ, ἀπὸ λιχανοῦ τρίτον ἐν-  
 10 αρμόνιον ἢ χρωματικῆς ἢ διατό-

P:

> ἀ[πὸ  
 ὑ]πάτης μέσων, ἐπὶ παραμέσῃν·  
 δε[ύτερον] δὲ οὐ δεύτερος ὁ τό-  
 νος ἐπὶ τὸ ὀξύ ἀπὸ παρυπάτης  
 μέσων, ἐπὶ τρίτην διεξευγμένων·  
τρίτος δὲ οὐ ὁ τόνος ἐπὶ  
 τὸ ὀξύ· ἀπὸ λιχάνου τρίτον ἐν-  
 αρμονίου, ἢ χρωματικῆς ἢ διατό-

νου ἐπὶ παρανήτην διεξευγμένων  
 έναρμόνιον ἢ χρωματικὴν κατὰ  
τόνον· τέταρτον δὲ οὐ τέταρτος  
 ὁ τόνος ἐπὶ τὸ ὀξύ, ἀπὸ μέσης  
 15 ἐπὶ νήτην διεξευγμένων.  
 = Anon § 61 (MSS:ABC)

νου ἐπὶ παρανήτην διεξευγμένων  
 έναρμόνιον ἢ χρωματικὸν ἢ  
 τόνον· τέταρτον δὲ, οὐ τέταρτος  
 ὁ τόνος ἐπὶ τὸ ὀξύ, ἀπὸ ν[ή]της  
 ἐπὶ νεάτην διεξευγμένων·

3 ἀπὸ om S<sup>ac</sup> 5 οὐ P 8 οὐ] + τρίτος Anon ὁ om S 9 τρίτον] μέσων  
 Anon (Vincent), ὃν AB, ὃν C 10 χρωματικοῦ S 10-11 διατόνου om S<sup>ac</sup>  
 12 χρωματικῇ P 12-13 κατὰ τόνον S et ABC, ἢ τόνον P, ἢ διάτονον Anon  
 (Bellermann) 14 ἐπὶ τὸ ὀξύ om S<sup>ac</sup> μέσης] γ της P (sed νητης adhuc  
 vidit Perne) 15 νήτην] νύτων S, νεάτην P

## NOTES:

- \* 1. I take P's abbreviation of -κὸν in line 12 to be "the normal -ον abbreviation plus a gravis". According to Najock, the tradition of the Anonymus is split (χρωματικὴν A, χρωματικὸν BC); it is therefore difficult to ascertain which reading was in the common ancestor of P and S.
- \* 2. In line 14, the traces still preserved in P might as well be read as μ[έ]σης. But since Perne writes νήτης (the underlined letters are pencilled in Perne's apograph) and Høeg has [ ]της, Perne's testimony is to be accepted. S transmits the correct text. Perhaps νήτης of P reflects a misunderstanding of a correction of the faulty νεάτην in the model manuscript.

60. Τῶν δὲ τοῦ διὰ πασῶν σχη-  
 μάτων δεύτερον < > ἐστὶν οὐ  
δεύτερος ὁ τόνος ἐπὶ τὸ ὀξύ,  
 ἀπὸ ὑπάτης ὑπατῶν ἐπὶ μέσῃν·  
 5 τρίτον δὲ οὐ < > ὁ τόνος ἐπὶ  
 τὸ ὀξύ, ἀπὸ παρυπάτης ὑπατῶν  
 ἐπὶ τρίτην διεξευγμένων· τέ-  
ταρτον δὲ οὐ τέταρτον τὸ ἐπὶ  
 τὸ ὀξύ, ἀπὸ λιχανοῦ ὑπάτης ἐν-  
 10 αρμονίου < > ἐπὶ παρανήτην διε-  
 ξευγμένων έναρμόνιον ἢ χρωματι-  
κὸν ἢ διάτονον· πέμπτον δὲ οὐ  
πέμπτος ὁ τόνος ἐστὶν ἐπὶ τὸ  
 ὀξύ, ἀπὸ ὑπάτης μέσον ἐπὶ νή-  
 15 την διεξευγμένων· ἕκτον δὲ οὐ  
ἕκτος ὁ τόνος ἐστὶν ἐπὶ τὸ ὀξύ,  
 ἀπὸ παρυπάτης μέσων ἐπὶ τρίτην  
 ὑπερβολαίων· ἑβδομον οὐ ἑβδο-

P: τῶν δὲ τοῦ διαπασῶν σχη-  
 14v μάτων· δεύτερος ἐστὶν οὐ  
ὁ δεύτερος τόνος ἐπὶ τὸ ὀξύ,  
 ἀπὸ ὑπάτης ὑπατῶν ἐπὶ μέσῃν·  
τρίτος οὐ ὁ τόνος ἐπὶ  
 τὸ ὀξύ, ἀπὸ ὑπάτης ὑπατῶν  
 ἐπὶ τρίτην διεξευγμένων· τέ-  
ταρτος δὲ οὐ τέταρτον τὸ ἐπὶ  
 τὸ ὀξύ ἀπολιχανοῦ ὑπάτης ἐν-  
 αρμονίου· ἐπὶ παρανήτην διε-  
 ξευγμένων έναρμόνιον ἢ χρωματι-  
 κὸν ἢ διάτονον· πέμπτος δὲ, οὐ  
ὁ πέμπτος ὁ τόνος ἐστὶν· ἐπὶ τὸ  
 ὀξύ ἀπὸ ὑπάτης μέσον ἐπὶ νή-  
 την διεξευγμένων· ἕκτος δε οὐ  
ἕκτος ὁ τόνος < > ἐπὶ τὸ ὀξύ  
 ἀπὸ ὑπάτης μέσων ἐπὶ τρίτην  
 ὑπερ[βολαί]ων· ἑβδομος οὐ ἑβδο-

20 μος ὁ τόνος ἐστὶν ἐπὶ τὸ ὀξύ,  
 ἀπὸ λιχανοῦ μέσων ἐναρμονίου  
 ἢ χρωματικῆς ἢ διατόνου ἐπὶ  
 παρανήτην ὑπερβολαίων ἐναρμό-  
 νιον ἢ χρωματικὸν ἢ διάτονον·  
 25 ὀγδοον δὲ οὗ ὀγδοος ὁ τόνος  
 ἐστὶν ἐπὶ τὸ ὀξύ, ἀπὸ μέσης  
 ἐπὶ νήτην ὑπερβολαίων.  
 = Anon § 62 (MSS:ABC)

μος ὁ τόνος ἐστὶν· ἐπὶ τὸ ὀξύ,  
 ἀπὸ] λιχάνου μέσων ἐναρμονίου  
 ἢ χρωματικῆς ἢ διατόνου· ἐπὶ  
 παρανήτην ὑπερβολαίων· <  
 > ὀγδοον δὲ· οὗ ὀγδοος ὁ τόνος  
 ἐστὶν ἐπὶ τὸ ὀξύ ἀπὸ μέσης  
 ἐπὶ νήτον ὑπερβόλαιον:-

1 τοῦ om S 1-2 σχημάτων PS Anon (Vincent), σχήματα ἐστὶ ABC, σχήματα  
 ἐστὶ· < πρῶτον μὲν, οὗ πρῶτος ὁ τόνος ἐπὶ τὸ ὀξύ ἀπὸ προσλαμβανομένου  
 ἐπὶ μέσην> coniecit Bellermann, sed Vincent (quem Najock secutus est)  
 numeros tota sectione mutare maluit, ita ut pro δεῦτερον πρῶτον, pro  
 τρίτον δεῦτερον etc legendum esse contenderet. Hic tantum codices P et  
 S cum libris manuscriptis ABC comparantur 2 δεῦτερον S, δεῦτερος P,  
 δεῦτερον δὲ ABC 3 δεῦτερος ὁ SAB, ὁ δεῦτερος P, θυτὸς ὁ C 4 μέσην  
 PS, παραμέσην Anon (AB), παραμέσω C 5 τρίτον δὲ] τρίτος δὲ B, τρίτος  
 P οὗ] + τρίτος Anon (AB), + τρίτου C ὁ om C 6 παρυπάτης] ὑπάτης P  
 7 ἐπὶ] + μέσην P<sup>ac</sup> (deleuit ipse) τρίτον S 7-8 τέταρτος δὲ P 8 τέταρτον  
 τὸ P, τέταρτον S, τέταρτος ὁ τόνος ABC 9 ὑπατῶν Anon (Bellermann)  
 9-10 ἐναρμόνιον S, + ἢ χρωματικῆς ἢ διατόνου Anon (Vincent) 10-11 παρά-  
 νιτον διεξευγμένον S 11-12 χρωματικὴν Anon (C), χρωματικὴ S 12 πέμπ-  
 τος δὲ P 13 ὁ πέμπτος ὁ τόνος P 14 μέσων Anon (ABC) 15 διεξευγμένον  
 S 16 ἔκτος δὲ P ἐστὶν om P 17 ἀπὸ - 19 ὀξύ om. S<sup>ac</sup> (add ipse marg),  
 bis scripsit C 17 παρυπάτης] ὑπάτης P μέσον S 18 ἑβδομον] ἑβδομος P,  
 ἑβδομον δὲ S 20 ἐναρμόνιον S 22 παρανίτων S 22 ἐναρμόνιον - 23  
 διάτονον om P 23 χρωματικὴν Anon (Najock) διὰ τόνου S 26 νήτην  
 ὑπερβόλαιον P, νήτην ὑπερβολεῶν S

## NOTES:

- \* 1. the faulty text of the *archetypus* was transmitted in the common ancestor of P and S with the following changes:

1-2 σχήματα ἐστὶ	: σχημάτων
2 δεῦτερον δὲ	: δεῦτερον
4 παραμέσην	: μέσην
5 οὗ τρίτος	: οὗ
10 τέταρτος ὁ τόνος	: τέταρτον τὸ P, τέταρτον S
9 ὑπατῶν	: ὑπάτης
14 μέσων	: μέσον

The list is probably not complete; it may be, for instance, that a νήτην (for νήτη) hides behind 10 παρανίτον (S), 22 παρανίτων (S), and 26 νήτην (P). See also §62 note 2.

- \* 2. It is difficult to understand what made P change the neuter forms in lines 2,5,7-8 etc. into masculines. Curiously enough, the *ὄγδοον* in 24 has been kept intact.
- \* 3. The omission of *δὲ* (line 2, after *δεύτερον*) may be a deliberate emendation.

XVI. 61. Τόποι φωνῶν τέσσαρες· ὑπα- P: Τόποι δὲ φωνῶν τέσσαρες· ὑπα-  
 τοειδῆ, μεσοειδῆ, νητοειδῆ, τοειδῆ· μεσοειδῆ· νητοειδῆ·  
 ὑπερβολοειδῆ. ἐν μὲν οὖν τῷ ὑπερβολοειδῆ· ἐν μὲν οὖν τῷ  
 πρώτῳ τίθεται τετράχορδα πέντε· πρώτῳ, τίθεται τετραχῶς δ' ἀπέντε,  
 5 ὑπολύδια δύο, ὑποφρύγια δύο, ὑπολύδια δύο· ὑποφρύγια δύο·  
 ὑποδώριον ἔν. ἐν δὲ τῷ δευτέρῳ 15x ὑποδώριο[ν ἔ]γ' ἐν δὲ τῷ δευτέρῳ,  
 τρία· δώρια δύο καὶ φρύγιον ἔν. τρία· δώρια δύο καὶ φρύγιον ἔν·  
 ἐν δὲ τῷ τρίτῳ μιξολύδια δύο, ἐν δὲ τῷ τρίτῳ μιξολύδια δύο  
ὑπερβολαίων < >. ὑπερβολοειδῆς ὑπερβολαίων· ὑπερβολοειδῆς  
 10 ἔστι πᾶς ὁ ἀπὸ τοῦ ὑπερμιξολυδίου ἔστι, πᾶς ὁ ἀπὸ τοῦ ὑπερμιξολυδίου,  
 ου.  
 = Anon § 63 (MSS:ABC)

1 τόποι + δὲ P φωνῆς Anon 2-3 -δὴ quater S, -δῆς Anon 4 τετράχορδος  
 S, τετραχῶς P πέντε] δ' ἀπέντε P, ἥς S (ut videtur) 5 ὑπολύδια P et C,  
 ἀπολύδια AB, ὑπολύδιοι S ὑποφρύγιοι S 7 δώρια] λύδια Anon (Najock,  
 Vincent) καὶ non habet Anon 8 μιξολύδια P, μιξολύδιον S δύο] ἔν S  
 9 ὑπερβολαίων ἔν ABC, ὑπερβολαίων P, ὑπερβολαίως S, ὑπερμιξολύδιον ἔν Anon  
 (Bellermann)

#### NOTES:

- \* 1. Τετραχῶς δ' ἀπέντε (P, line 4) is easily explained; but what is behind the ἥς of S?
- \* 2. Μιξολύδιον ἔν ὑπερβολαίως (S, lines 8-9) seems to be an attempt to get something out of a corrupt text.

62. Ἀρχεται δὲ ὁ μὲν ὑπατοειδῆς τόπος ἀπὸ ὑπάτης μέσων ὑπο- P: Ἀρχεται δέ· ὁ μὲν ὑπατοειδῆς τόπος, ἀπὸ ὑπάτης μέσων ὑπο-  
 δωρίου καὶ λήγει ἐπὶ μέσον δώ- δωρίου· καὶ λήγει ἐπὶ μέσον δώ-  
ριον· ὁ δὲ μεσοειδῆς ἀρχεται ριον· ὁ δὲ μεσοειδῆς, ἀρχεται  
 5 ἀπὸ ὑπάτης μὲν φρυγίου, λήγει ἀπὸ ὑπάτης μὲν φρυγίου λήγει  
 δὲ ἐπὶ μέσον λύδιον· ὁ δὲ νη- δὲ ἐπὶ μέσον λύδιον· ὁ δὲ νη-  
 τοειδῆς ἀρχεται μὲν ἀπὸ μέσης τοειδῆς ἀρχεται μὲν ἀπὸ μέσης  
λυδίου, λήγει δὲ ἐπὶ νήτην συν- ληδίου· λήγει δὲ ἐπὶ νήτην συν-

ημμένων < >· ὁ δὲ μετὰ τούτου  
 10 < > ὑπερβολοειδής.  
 = Anon § 64 (MSS:ABC)

ημμένων· ὁ δὲ μετὰ τούτου  
 ὑπερβολοειδής:-

1 δὲ om S μὲν post ἄρχεται transposuit S 2-3 μέσον ὑποδόριον S  
 3 μέσην Anon (Najock), μέσων ABC 3-4 δόριον S, ὑπολύδιον Anon (Ge-  
 vaert) 4 ἄρχεται] + μὲν S et Anon(Najock, e codice S) 5 μὲν om S et  
 Anon(Najock, ut supra), μέσων coniecit Bellermand φρυγίου P et Anon(Na-  
 jock), φρύγιον S, φρυγίων ABC 6 μέσην Anon(Najock, Bellermand), μέσων ABC  
 8 λυδίου] μεξολυδίου Anon(Najock), λύδιον S νήτων S 8-9 συνημμένων]  
 + ὑπερμεξολύδιον Anon(Najock, Vincent) 9 τούτου P, τοῦτον S, τούτους ἐστὶν Anon

#### NOTES:

- \* 1. In line 5, it is perhaps more likely that the common ancestor of P and S had the misspelling φρυγιον (for φρυγίων). S corrected the accentuation, P emendated φρυγιον into φρυγίου.
- \* 2. For νήτων (S, line 8), cf. §60 note 1.

XVII 63. Μεταβολὴ δὲ ἐστὶν ὁμοίου  
 τινὸς εἰς ἀνόμοιον τόπον ἀλλοί-  
 ωσις ἰσχυρὰ καὶ ἀθρόα. τῶν δὲ  
 μεταβολῶν αἱ μὲν εἰσι γενικαί,  
 5 αἱ δὲ τονικαί, αἱ δὲ συστηματι-  
 καί· καὶ γενικαὶ μὲν αἱ τῶν  
 γενῶν εἰς ἄλληλα μεταβολαί.  
 οἶον ἁρμονίας χρῶμα· τονικαὶ  
 δὲ αἱ τῶν τόνων (οἶον λυδίου,  
 10 φρυγίου καὶ τῶν λοιπῶν) εἰς  
αὐτάς μεταβολαί· συστηματικαὶ  
 δὲ, ὁπόταν ἐκ διαζεύξεως εἰς  
 συναφὴν ἢ ἔμπαλιν μετέλθῃ τὸ  
 μέλος.  
 = Anon § 65 (MSS:ABC)

P: Μεταβολὴ δὲ ἐστὶν ὁμοίου  
 τινὸς εἰς ἀνόμου[ον τόπ]ον ἀλλοί-  
 ωσις ἰσχυρὰ καὶ ἀθρόα· τῶν δὲ  
 μ[εταβολῶν], αἱ μὲν εἰσι γενικαί·  
 αἱ δὲ τονικαί· αἱ δὲ, συστηματι-  
 καί· καὶ γενικαὶ μὲν αἱ τῶν  
 γενῶν εἰς ἄλληλα μεταβολαί·  
 οἶον, ἁρμονίας χρῶμα· τονικὰ  
 δὲ εἰσὶν, αἱ τῶν τόνων, οἶον, λύδιος  
φρυγίος καὶ τῶν λοιπῶν· εἰς·  
 αὐτάς μεταβολαί· συ< >ματικαὶ  
 δὲ, ὁπόταν ἐκ διαζεύξεως εἰς  
 συναφὴν ἢ ἔμπαλιν μετέλθῃ τὸ  
 μέλος·

1 δὲ om S 4 et 6 γεννικαί S 5 αὐ - 6 μὲν om ABC, restituit Najock  
 (e codd P et S) 7 γεννῶν S 8 ἁρμονίας P, ἁρμόνιον S, ἁρμονία Anon  
 8 τονικαί Anon (AB), τονικὸν C, τονικὰ P, τόνων S 9 δὲ] + εἰσὶν P  
 λύδιος P, λυδίου καὶ S 10 φρύγιος P 11 αὐτοὺς Anon (Najock), αὐτῶν S  
 11 μεταβολαί Anon(Najock, e PS), μεταβολή ABC 13 ἔκ πάλιν S  
 14 μέλος] + μελωδίῃ S

## NOTES:

- \* 1. Najock 1975 p.XVI takes 5-6 to be a conjecture in the model of P and S.
- \* 2. If the reading of S in line 9 (τόνων) is considered to be an attempt to emendate, it is less likely that the common ancestor of P and S had the correct reading τουδικά. Maybe rather τονικά - a small error which must then have been already in the *archetypus* and which has called forth the emendations of S and C, as well as the correct emendation of AB.
- \* 3. The word μελωδία which ends the paragraph in S may have its origin in the μελοποιία which introduces the next paragraph. Between these two paragraphs S has only a comma.

64. Μελοποιία δέ ἐστι ποία  
χρήσις τῶν ὑποκειμένων.

P: [μ]ελοποιία δέ ἐστὶ ποία  
15v χρήσις τῶν ὑποκειμένων:-

= Anon § 66 (MSS: ABC)

1 δὲ om S    2 post ὑποκειμένων finem sectionis indicant PS et B, sectionem continuant A et C

## NOTES:

- \* 1. The Melopoia is normally treated at the end of the compendia, see e.g. Cleonides (ed. Jan, pp. 206-07).
- \* 2. The rest of Anon §66 is printed below, as §86.
- \* 3. Once more, S leaves out the δέ at the beginning of a paragraph; cf. §§58,62,63 - and below §§65.

XVIII 65. Διάστημα δέ ἐστι τὸ περι-  
εχόμενον ἥτοι ὀρισμένον ὑπὸ  
δύο φθόγγων ἀνομοίων τῇ τάσει.  
τὸ γὰρ διάστημα φαίνεται, ὡς  
5 τύπῳ εἰπεῖν, τάσεων διαφορὰ  
εἶναι καὶ ὅλως τόπος δεκτικὸς  
φθόγγων ὀξυτέρων μὲν οὔτε πέ-  
ρας οὐσῶν τῆς τῶν ὀριζουσῶν  
τὸ διάστημα τάσεως, βαρυτέρας  
10 < > δὲ ἀνάπαλιν. διαφορὰ δέ  
ἐστι τῶν τάσεων τὸ μᾶλλον ἢ  
ἥττον τετάσθαι.

P: Διάστημα δέ ἐστὶ τὸ περι-  
εχόμενον· ἥτοι ὀρισμένον ὑπὸ  
δύο φθόγγων ἀνομοίων τῇ τάσει·  
τὸ γὰρ διάστημα φαίνεται ὡς  
τύπῳ εἰπεῖν, τάσεων διαφορὰ  
εἶναι καὶ ὅλως τόπος δεκτικὸς  
φθόγγων ὀξυτέρων μὲν· οὔτε πέ-  
ρας οὐσῶν τῆς τῶν ὀριζουσῶν  
τὸ διάστημα τάσεως· βαρυτέρας  
δὲ ἀνάπαλιν· διαφορὰ δέ  
ἐστι τῶν τάσεων· τὸ μᾶλλον ἢ  
ἥττον τετάσθαι·

= Anon § 50 (MSS: ABCD)

1 δὲ om S et ABC    5 τάσεως S    7 οὔτε om S, ἄτε Anon (Najock)    8 οὔσης  
Anon    9 τάσεων Anon (ex Aristoxeno)    βαρυτέρας] + βαρυτέρων Anon (Na-  
jock)    10 ἀνάπαλιν P

## NOTES:

- \* 1. It is impossible to decide whether or not the common ancestor of P and S had δέ in line 1. See §64 note 3 on S's frequent leaving out of this particle.
- \* 2. on p. 219 of his Göttingen edition Najock includes οὐσῶν (8) among the "Sonderfehler oder Konjekturen" of these MSS. But as long as the corrupt text of the *archetypus* has not been satisfactorily restored, we cannot know for sure.

66. Σύστημα δέ ἐστι σύνταξις  
πλειόνων φθόγγων ἐν τῷ τῆς φω-  
νῆς τόπῳ θέσιν τινα ποιὰν ἑ-  
χουσα ἢ τὸ ἐκ πλειόνων ἢ ἐνός

P: σύστημα δέ ἐστι σύνταξις  
πλειόνων φθόγγων ἐν τῷ τῆς φω-  
νῆς τόπῳ θέσιν τινα ποι[ὰν ἑ-]  
χουσα <

5 διαστήματος συνεστός.

> :-

= Anon § 51 (MSS:ABC)

3 τοποθεσίαν S ποιὰν om S 4 ἡ<sup>1</sup> - 5 συνεστός om P 5 συνεστώς Anon

XIX 67. Εἰς μὲν τὴν φωνὴν τὴν ἀν-  
θρωπίνην, ὥρισται κατὰ τόπον  
ὃν διεξέρχεται μελωδοῦσα. ὥ-  
ρισται γὰρ καὶ ὁ μέγιστος καὶ  
5 ὁ ἐλάχιστος τόπος ἐπ' αὐτῆς·  
οὔτε γὰρ ἐπὶ τὸ μέγα δύναται  
ἡ φωνὴ εἰς ἀπειρον αὔξειν τὴν  
τοῦ ὀξέως καὶ βαρέως διάστασιν  
οὔτ' ἐπὶ τὸ μικρὸν συνάγειν,  
10 ἀλλ' ἔσταταί που ἐφ' ἑκάτερα.  
= Anon § 42 (MSS:ABC)

P: 'Ε[ις μὲν τῇ]ν ἀνθρωπίνην  
φωνήν, ὥρισται κατὰ τόπον  
ὃν διεξέρχεται μελωδοῦσα, ὥ-  
ρισται < > καὶ ὁ μέγιστος καὶ  
ὁ ἐλάχιστος τόπος ἐπ' αὐτῆς·  
οὔτε γὰρ ἐπὶ τὸ μέγα δύναται  
ἡ φωνὴ εἰς ἀπειρον αὔξειν, τὴν  
τοῦ ὀξέως καὶ βαρέως διάστασιν,  
οὔτ' ἐπὶ τὸ μικρὸν συνάγειν·  
ἀλλ' ἔσταταί που ἐφ' ἑκάτερα <

1 φωνὴν (sine articulo) post ἀνθρωπίνην transposuit P 2 τόπους S

3 ὃν διεξέρχεται om S 4 γὰρ om P 6 ἐπὶ τὸ μέγα] ἐπιτεταμένως S,  
ἐπὶ τὸ μέγα P 7 αὔξειν P 8 ὀξέος καὶ βαρέος Anon(ABD), ὀξέος καὶ  
βαρέως C, βαρέως καὶ ὀξέως S 10 ὅπου S

68. Ὅριστέον οὖν ἑκάτερον αὐ-  
τῶν, πρὸς δύο ποιουμένους τὴν  
ἀναφοράν, τὸ φθεγγόμενον καὶ

P: > αὐ-  
τῶν, πρὸς δύο ποιουμένους τὴν  
ἀναφοράν, τὸ φθεγγόμενον καὶ

τὸ κρινόμενον, τουτέστι φωνήν  
 5 καὶ ἀκοήν. οὐ γὰρ ἀδυνατοῦσιν 21r  
 αὔται ἢ μὲν ποιῆσαι ἢ δὲ κρῖναι,  
 τοῦτο ἔξω θετέον τῆς τε χρησί-  
 μου καὶ δυνατῆς ἐν φωνῇ γί-  
 νεσθαι διαστάσεως. ἅμα δ' ἐπὶ  
 10 τὸ μικρὸν ἀδυνατοῦσιν· οὔτε  
 γὰρ ἢ φωνὴ διέσεως ἐναρμονίου  
 ἐλαττόν τι διάστημα δύναται  
 διασαφεῖν, οὔτε ἢ ἀκοὴ αἰσθά-  
 νεσθαι ὥστε γε καὶ ξυνιέναι τί  
 15 μέρος ἐστίν, εἴτε διέσεως εἴτε  
 ἄλλου τινὸς τῶν γνωρίμων δια-  
 στημάτων. ἐπὶ δὲ τὸ μέ..... τῆς  
 φωνῆς τὸ βαρὺ καὶ τὸ ὀξύ ὁ μουσι-  
 κὸς σκοπεῖ, τουτέστι πλατὺ καὶ  
 20 στενὸν ἐκ τοῦ περὶ τὴν ἀρτηρίαν  
 πάθους, ταχ' ἂν δόξειεν ὑπερτεί-  
 νειν τὴν φωνήν ἢ ἀκοή, οὐ μὴν  
 πολλῶ τινι.

= Anon § 43 (MSS:ABC)

τὸ κρινόμενον, τουτέστι, φωνήν  
 καὶ [ἀκ]οήν· οὐ γὰρ ἀδυνατοῦσιν  
 αὔται· ἢ μὲν, ποιεῖται· ἢ δὲ, κρῖναι  
 τοῦτο· ἔξω θετέον τῆς τε χρησί-  
 μου καὶ δυνατῆς ἐν φωνῇ γί-  
 νεσθαι διαστάσεως· ἅμα δ' ἐπὶ  
 τὸ μικρὸν ἀδυνατήσιν· οὔτε  
 γὰρ ἢ φωνὴ διέσεως ἐναρμονίου  
 ἐλαττόν τι διάστημα γίνεται  
 διασαφὴν, οὔτε ἢ ἀκοὴ αἰσθά-  
 νεσθαι ὥστε γε καὶ ξυνιέναι τί  
 μέρος ἐστίν· εἴτε διέσεως εἴτε  
 ἄλλου τινὸς τῶν γνωρίμων δια-  
 στημάτων· ἐπὶ δὲ τὸ μέλος τῆς  
 φωνῆς, τὸ βαρὺ καὶ τὸ ὀξύ ὁ μουσι-  
 κὸς σκοπεῖ· τουτέστι πλατὺ καὶ  
 στενὸν, ἐκ τοῦ περὶ τὴν ἀρτηρίαν  
 πάθους· τάχ' ἂν δόξει ἐν υπερτεί-  
 νειν τὴν φωνήν [ἢ] ἀκοῇ· οὐ μὴν  
 πολλῶ τινι

1 'Οριστέον οὖν ἐκάτερον om P 4 κρινόμενον PS, κρῖνον Anon 5 οὐ PS,  
 ὁ Anon 6 ποιεῖται P 8-9 γίνεται διάστασις S 9 δὲ S 10 ἀδυνατήσιν P  
 12 ἐλαττόν PS 12 δύναται] γίνεται P 13 διασαφὴν P 17 <Ε>κεὶ δὲ S  
 μέλος P, μέτρον S, μέγα Anon 21 δόξειεν] δόξει ἐν P, δ'όξειαν S ut  
 videtur 23 τινι] τίνειν S

#### NOTES:

- \* 1. In line 17, the reading of S (κεὶ δὲ, at the beginning of the first line on the page) seems to imply that a red initial letter was planned.
- \* 2. In the same line, neither μέλος (P) nor μέτρον (S) makes sense. The other MSS correctly have μέγα, ἐπὶ τὸ μέγα corresponding to ἐπὶ τὸ μικρὸν in lines 9-10. Apparently, the model MS was difficult to read - cf. §67,6 where ἐπὶ τὸ μέγα became ἐπὶ τὸ μέσα in P, ἐπιτεταμένως in S.

69. Ἔστιν μὲν οὖν ἴδιον τῆς  
 ἀκοῆς τὸ ἐπὶ τὸ μέγιστον, τῆς  
 δὲ φωνῆς τὸ ἐπὶ τὸ ἐλάχιστον  
 πέρας, ἢ κοινὸν ἀμφοτέρων. ὅπως

P: ἔστιν μὲν οὖν ἴδιον [τῆς  
 ἀκοῆς] τὸ ἐπὶ τὸ μέγιστον· τῆς  
 δὲ φωνῆς τὸ ἐπὶ τὸ ἐλάχιστον  
μέρος· ἢ κοινὸν ἀμφοτέρων ὅπως

- 5 δ'οὖν ἐὰν λαμβάνη, ὥρισται ἡ τε τοῦ ὀξεῶς καὶ βαρέως διάστασις εἰς τε τὴν φωνὴν < > τίθησιν· < > δὲ ταύτη καθ' αὐτῇ νοηθείσῃ τῇ τοῦ μέλους φύσει τὴν αὐξησιν
- 10 ἄπειρον συμβήσεται γίνεσθαι· ἀλλ' ὁ λόγος οὐκ ἀναγκαῖος εἰς τὸ παρόν.  
= Anon § 44 (MSS:ABC)

3 τὸ 'λάχιστον S 4 πέρας] μέρος P κοινὸν] κατὰ S 5 ἐὰν S et ABCD, ἂν Anon (Bellermann), λὰν P ut videtur (λὰφ Perne) λαμβάνη codd (λαμβάνει C), λαμβάνεται Anon (Najock), λαμβάνη τις coniecit Bellermann  
6 τοῦ βαρέως S 7 ἥ S τε om P φωνῇ] + καὶ τὴν ἀκοὴν Anon (Bellermann, ex Aristoxeno) τίθησιν codd, τεθεῖσα Anon (Bellermann, ex Aristoxeno) 8 δὲ P, εἰ δὲ S et Anon ταύτῃ] ταύτην S et C καθ' αὐτῇ S, καθ' αὐτὴν Anon αὐτῇ νοηθήσεται P, vide annotationem νοηθείη S et Aristoxenus 10 συμβήσεται om P 11 ἀλλ' ὁ codd, ἄλλος Anon (Najock, ex Aristoxeno) ἀναγκαῖος S 11-12 εἰς τὸ παρόν om P

## NOTES:

- \* 1. In line 1, Najock's text and manuscripts read ἔστιν οὖν ὕδιον μὲν. By an oversight this reading has not been mentioned in the critical apparatus.
- \* 2. P's reading in 8 is probably to be understood as a correction *in scribendo* from αὐτὴν to αὐτῇ.

- XX 70. Τοῦ μέλους τὸ μὲν ἐστὶ λο- P: <Τ>οῦ μέλους τὸ [μὲν] ἐστὶ λ[ο-  
γῶδες, τὸ δὲ μουσικόν. < > γῶδες, τὸ δὲ, μουσικόν·
- τὸ συγκείμενον ἐκ τῶν προσωδι- 21v τὸ | συγκείμενον ἐκ τῶν προσωσι-  
ῶν τῶν ἐν τοῖς ὀνόμασι· φυσικόν όντων ἐν τοῖς ὀνόμασιν· φυσικόν
- 5 γὰρ τὸ ἐπιτείνειν τε καὶ ἀνιέναι γὰρ τὸ ἐπιτείνειν τε καὶ ἀνιέναι  
τὴν φωνὴν ἐν τῷ διαλέγεσθαι. τὴν φωνὴν ἐν τῷ διαλέγεσθαι·
- μουσικόν δὲ ἐστὶ μέλος (περὶ ὃ μουσικόν δὲ ἐστὶ μέλος περὶ ὃ  
καὶ ἡ ἁρμονία καταγίνεται) τὸ καὶ ἡ ἁρμονία καταγίνεται τὸ  
διαστηματικόν, τὸ ἐκ φθόγγων τε διαστηματικόν· τὸ ἐκ φθόγγων τὲ
- 10 καὶ διαστημάτων συγκείμενον. καὶ διαστημάτων συγκειμένων:-  
δεῖ γὰρ ἐν τούτῳ διαστηματικὴν <  
εἶναι τὴν τῆς φωνῆς κίνησιν, καὶ  
πλείονος ἐνὸς τὰς μονάδας. >

= Anon §45 (MSS:ABCD)

2 μουσικόν] + λογῶδες μὲν οὖν ἐστὶ Anon 3-4 προσωσιόντων P 5 ἐπιτείνην P  
8 ἁρμονικὴ Anon καταγίγνεται Anon 10 συγκειμένων P 11-13 et §§70a-d  
non habet P 13 πλείονας Anon ἐνὸς S, εἶναι Anon(ACD), om B

Quae sequuntur (§§70a-d) e codice S foll 93r-v addidi:

70a. Οὐ μόνον δὲ ἐκ διαστήματος καὶ φθόγγων δεῖ συνεστάναι τὸ  
ἡρμοσμένον μέλος· καὶ ἔχον τὴν προσήκουσαν στάσιν, ἀλλὰ προσ-  
δεῖται μιᾶς τινὸς θέσεως καὶ οὐ τῆς τυχούσης· τὸ γὰρ ἐκ δια-  
στημάτων καὶ φθόγγων συνεστάναι κοινὸν καὶ τῷ ἀναρμόστῳ·

= Anon §46 (MSS:ABCD)

1 διαστημάτων Anon 2 στάσιν] τάξιν Anon 3 μιᾶς] ποῖας Anon

70b. ὥστε εἰς τὴν κοινῶς γιγνομένην σύστασιν τοῦ μέλους, τὸ  
πλείστην ἔχον ῥοπὴν περὶ τὴν σύνθεσιν < > καὶ τὴν ταύτης ἰ-  
διότητα ὑποληπτικόν· τοῦ μὲν οὖν ἐπὶ τῆς λέξεως μέλους διοίσει  
τὸ μουσικόν τῷ διαστηματικῇ κεχρησθαι κινήσει τῆς φωνῆς· τοῦ  
5 δὲ ἀναρμόστου τε καὶ διημαρτημένου, τῇ τῆς συνθέσεως διαφορᾷ  
τῶν διαστημάτων.

= Anon §47 (MSS:ABCD)

1 κοινῶς] ὁρθῶς Anon 2 σύνθεσιν] + που Anon 3 ὑποληπτέον Anon  
6 finem sectionis indicat S

70c. Ὁ φθόγγος κοινὸς μὲν ἐστὶ αὐτὸ τὸ ὄνομα, ἰδίως δὲ ὁ χα-  
ρακτήρ ὁ γραφόμενος, ἰδιαίτατα δὲ ἡ δύναμις αὐτῇ τοῦ φθόγγου,  
καθ' ἣν ὁξύν τινα ἢ βαρύν λεγόμενον καὶ ὀριζόμενον φαμέν·  
φθόγγος δὲ ἐστὶ φωνῆς ἐμμελοῦς πῶσις ἐπὶ μίαν στάσιν· καὶ τό-  
5 τε γὰρ φαίνεται < > εἶναι τοιοῦτος οἶος εἰς μέλος τάττεται  
ἡρμοσμένον, ὅταν ἡ φωνὴ φανῇ ἐστάναι καὶ ἐπὶ μιᾶς τάσεως·  
τάσις δὲ ἐστὶν οἶον στάσις καὶ μονὴ τῆς φωνῆς,

= Anon §48 (MSS:ABCD)

1 κοινὸς SD, κοινῶς Anon(ABC) δὲ habent SD, om Anon(ABC) 2 αὐτοῦ Anon  
3 λέγομεν ὅν καὶ ὀριζόμενοι φαμεν Anon 4 στάσιν SABC et D ante corr, τά-  
σιν Anon e cod D post corr 5 φαίνεται] + φθόγγος Anon τάττεσθαι Anon  
6 καὶ codd, seclisit Anon(Bellermann)

70d. ἐστὶ < > τῶν ἐν μουσικῇ ὁ φθόγγος τὸ ἐλάχιστον καὶ ἀδιαίρετον ὡς μονάς, ἐν ψ καὶ σημειῖον ἐν γραμμῇ ἐστὶ δὲ ὁ φθόγγος κοινὸν κατηγορήμα ὀξύτης τε καὶ βαρύτης.

= Anon §49 (MSS:ABCD)

1 ἐστὶ] + δὲ Anon 2 ὡς μονάς ἐν ἀριθμῷ Anon 3 post βαρύτης finem sectionis indicat S

#### NOTES:

- \* 1. The omission of 11-13 and the loss of the Anonymi paragraphs 46-49 (in the numbering of the present edition §§70a-d) - all of which is still preserved in S - is a clear demonstration of my hypothesis that there was an intermediate manuscript between S and the common ancestor of S and P, and that this intermediate manuscript was copied before one folio was lost in the common ancestor. Cf. again the article referred to in §69 note 1.

XXI 71. Τῶν μελωδουμένων τρία ἐστὶ γένη\* ἁρμονία, χρῶμα, διάτονον. (21v) γένη\* ἁρμονία χρῶμα διάτονον\*  
ἁρμονία μὲν οὖν ἐστίν, ἐν ἣ τὸ ἁρμονία μὲν οὖν ἐστίν, ἐν ἣ τὸ  
πυκνὸν ἡμιτονίαζον\* αὕτη δὲ ἐσ- πυκνὸν ἡμιτονίαζον\* αὕτη δὲ <  
5 τι μονοειδής. > μονοειδής\*

= Anon §52(MSS:ABCD)

1-2 γένη ἐστίν Anon 3 οὖν om Anon 4-5 ἐστὶ om P

72. Χρώματος δὲ εἶδη τρία\* πρῶ- P: χρώματος < > εἶδη τρία\* πρῶ-  
τον μὲν καὶ ἐλάχιστον τὸ μαλακὸν τον μὲν καὶ ἐλάχιστον, τὸ μαλακὸν  
καλούμενον, ἐν ψ τὸ πυκνὸν τριῶν καλούμενον\* <  
ἐστὶ διαθέσεων ἐναρμονίων ἀεὶ ἐν  
5 δωδεκάτῃ μοριοτόνου. δεύτερον δὲ > τοῦτο δὲ  
τὸ ἡμιόλιον καλούμενον\* τοῦτο δὲ  
ἐστίν, ἐν ψ τὸ πυκνὸν ἡμιτονίου ἐστίν ἐν ψ τὸ πυκνὸν ἡμιτο[ν]ίου  
ἐστὶν καὶ διέσεως ἐναρμονίου. ἐστὶν καὶ διέσεως ἐναρμονίου\*  
τρίτον τὸ σύντονον καλούμενον, τρίτον τὸ σύν[τονο]ν καλούμενον,  
10 ἐν ψ τὸ πυκνὸν ἡμιτόνιον ἐστὶ. ἐν ψ τὸ πυκνὸν ἡμιτόνιον ἐστὶ.

= Anon §53(MSS:ABCD)

1 δὲ om P 3 ἐν ψ - 6 καλούμενον om P 4 διέσεων Anon 4-5 ἀεὶ δωδε-  
κάτῃ μοριοτόνου S ante corr, ante δωδεκάτῃ supra lin ἐν addidit et supra  
r<sup>io</sup> litteram uel litteras quarum sensum equidem non intelligo, ω tamen uix  
esse credo, ἐνὶ δωδεκατημορίῳ ἔλαττον D (in rasura, man sec), ἀεὶ δωδεκα-  
τημορίῳ τόνου ABC, μετὸν δωδεκατημορίῳ τόνου Anon(Bellermann) 8 διαίρε-  
σεως ἐναρμόνιον S

## NOTES:

- \* 1. It is evident that there is a connection between the  $\epsilon\nu$  of P (and of S post correcturam) and the  $\epsilon\nu\iota$  which is part of the words added by a second hand in D.

73. Διατόνου δὲ εἶδη δύο· πρῶ- P: διατόνου δὲ ἤδη δύο· πρῶ-  
τον μὲν καὶ ἐλάχιστον τὸ μαλακὸν τον μὲν καὶ ἐλάχι[στ]ον τὸ μαλακὸν  
καλούμενον· τοῦτο δὲ ἐστίν, ἐν καλούμενον· <  
ᾧ τὸ μὲν ὑπὸ ὑπάτης καὶ παρυπά-  
5 της < > καὶ λιχανοῦ ἐννάτου  
δωδεκατημόριον ἀσύνθετον λαμβα-  
νόμενον. δεῦτερον δὲ τὸ σύντο-  
νον καλούμενον, ἐν ᾧ τὸ μὲν > ἐν ᾧ τὸ μὲν  
ὑπὸ ὑπάτης καὶ παρυπάτης διά- [ὑπὸ ὑπά]της καὶ παρυπάτης, διά-  
10 στήμα ἡμιτονιαζόν ἐστι, τὸ δὲ στήμα ἡμιτονι[αζον ἐστίν,] τὸ δὲ  
παρυπάτης καὶ λιχανοῦ τονιαζόν. παρυπάτης καὶ λιχάνου τονιαζόν  
= Anon §54 (MSS:ABCD)

3 τοῦτο - 8 καλούμενον om P 4 ὑπὸ S et B, ἀπὸ ACD, seclisit Anon(Najock)  
4-5 καὶ παρυπάτης S (ante correcturam; deleuit ipse, ut uidetur), om ABCD,  
καὶ παρυπάτης διάστημα ἡμιτονιαζόν ἐστι, τὸ δὲ παρυπάτης Anon(Najock, cf  
Bellermann) 5 ἐννάτου (uel ἐννάτη?) S, ἐννέα Anon 6 δωδεκατημορίων  
Anon 6-7 λαμβανομένων Anon 9 ὑπὸ S, ἀπὸ ABCD, seclisit Anon(Najock)  
καὶ] + τὸ ABCD, seclisit Anon(Najock, cum PS et Par 2460) 11 τονιαζ-  
ον] + ἐστίν S

74. <H> δὲ ἀρμονική ὥς φραμεν P: < > δὲ ἀρμονική ὥς φραμέν,  
μονοειδὲς ὑπάρχει. μονοειδὲς ὑπά[ρ]χει[']  
= Anon §55 (MSS:ABCD)

1 litteram initialem om PS ἀρμονική codd, ἀρμονία Anon(Bellermann)

75. Πυκνὸν δὲ ἐστὶ τὸ ἐκ δύο δι- P: πυκνὸν δὲ ἐστὶ, τὸ ἐκ δύο δι-  
αστημάτων περιεχόμενον ἐλαττόνων αστημάτων περιεχ[ό]μενον, ἐλαττόνων  
τοῦ καλουμένου διαστήματος εἰς 16x τοῦ καλου[μέ]γου διαστήματος|εἰς  
τὴν διὰ τεσσάρων συμφωνίαν. < > διατεσσάρων συμφωνίαν·  
= Anon §56 (MSS:ABCD)

2 παρεχόμενον S, περιολυμενον (sic) Perne ἐλαττόνου S, ἔλαττον Anon(e  
cod Neap 1) 3 καλουμένου adhuc vidit Perne, καταλειπομένου Anon  
4 τὴν om P, τὴν τῶν D συμφωνιῶν S post corr

76. Ἐν δὲ τοῖς εἰρημένοις γένε- P: ἐκ δὲ τοῖς εἰρημένοις γένε-  
σι λιχανοὶ μὲν εἰσιν ἕξ, παρυπά-  
ται δὲ τέσσαρες· λιχανοῦ δὲ ἐστὶν  
ὁ σύμπας τόπος ἐν ᾧ κινεῖται το-  
5 νιαῦτος, ὁ δὲ τῆς παρυπάτης τόπος  
διέσεως ἐλαχίστης.

= Anon §57 (MSS:ABCD)

1 ἐκ P    2 εἰσιν] ἐστὶν S    2-3 παρυπάτη δὲ τετάρτη P    3 λιχανὸς P  
4 τόπος ὁ σύμπας S

- XXII 77. Τῆς φωνῆς τόπος ἔστι καὶ  
κατὰ τόπον κίνησις, καθ' ἣν με-  
λωδοῦσα ὀξύτερα καὶ βαρυτέρα  
γίνεται.

= Anon §33 (MSS:ABCD)

2 καθὸν P, non liq D

78. Πᾶσα μὲν οὖν φωνὴ οὕτω δύνα- P: πᾶσα μὲν οὖν φωνή, οὕτω δύνα-  
ται κινεῖσθαι· ἀλλ' ἢ μὲν ἐστὶ συν-  
εχῆς, ἢ δὲ διαστηματικὴ κίνησις.  
κατὰ μὲν οὖν τὴν συνεχῆ οἴεται ἡ  
5 ἀκοὴ μῆδαμοῦ ἐστάναι ἀλλὰ φέρε-  
σθαι συνεχῶς μέχρι σιωπῆς, κατὰ  
δὲ τὴν διαστηματικὴν ἐναντίως·  
διαβαίνουσα γὰρ ἴστησιν αὐτὴν  
ἐπὶ μιᾷς τάσεως, εἴτα πάλιν ἐφ'  
10 ἐτέρας, καὶ τοῦτο συνεχῶς ποι-  
οῦσα - λέγω δὲ συνεχῶς κατὰ τὸν  
χρόνον - ὑπερβαίνουσα μὲν < >  
τοὺς περιεχομένους ὑπὸ τῶν τά-  
σεων τόπους, ἵσταμένη δὲ ἐπ' αὐ-  
15 τῶν τῶν τάσεων καὶ φθεγγομένη  
ταύτας μόνον αὐτάς μελωδεῖν λέ-  
γεται καὶ κινεῖσθαι διαστηματι-  
κὴν κίνησιν. καὶ καλεῖται ἡ μὲν 16v λογικῇ, ἢ δὲ μελωδικῇ.

= Anon §34 (MSS:ABCD)

P: Τῆς φωνῆς τόπος ἐστὶ καὶ  
κατὰ τόπον κίνησις, καθὸν με-  
λωδοῦσα· ὀξύτερα καὶ βαρυτέρα  
γίνεται·  
καὶ τοῦτο συνεχῶς ποι-  
οῦσα, λέγω δὲ συνεχῶς κατὰ τὸν  
χρόνον ὑπερβαίνουσα μὲν  
τοὺς περιεχομένους, ὑπὸ τῶν τά-  
σεων τόπους· ἵσταμένη δὲ ἐπ' αὐ-  
τῶν τῶν τάσεων, καὶ φθεγγομένη  
ταύτας μόνον αὐτάς· μελωδεῖν λέ-  
γεται· καὶ [κινεῖ]σθαι διαστηματι-  
κὴν κίνησιν | καὶ καλεῖται· ἡ μὲν  
λογικῇ· ἢ δὲ μελωδικῇ·

1-2 δύνασθαι S 4 οὖν om S 5-6 ἀλλὰ φέρεσθαι] ἀναφέρεται S 8 [ἔσ]τη-  
 σι γὰρ αὐτὴν διαβαίνουσα P 9-10 ἐφετέρα P 10 ποιοῦσα - 11 συνεχῶς om  
 S, in marg suppl C 12 μὲν] + οὖν Anon 14 ὑπ' S 18 καὶ - 19 μελω-  
 δικὴ hic habent codd, post 3 κίνησις fortasse transponenda (Najock)  
 18-19 ἡ μὲν μελωδικὴ ἡ δὲ λογικὴ S

## NOTES:

- \* 1. Observe that S and C make the same omission *per homoeoteleuton* (10-11).

79. Τὸν γὰρ τοῦτο ποιοῦντα οὐ- P: τὸν γὰρ τοῦτο ποιοῦντα' οὐ-  
 δεῖς φησι λέγειν ἀλλ' ᾄδειν, δεῖς φησὶ λέγειν, ἀλλ' ᾄδειν  
 ἐκάτερόν τε ἐν τῇ τοῦ λοιποῦ ἐκατέρα τέ ἐν τῇ τοῦ λοιποῦ  
 χρειᾶ < > ὅσον γὰρ ἰστάμεθα, χρειᾶ' ὅσον γὰρ ἰστάμεθα,  
 5 γίνεται τῇ ἀκοῇ τὸ μέλος ἀκρι- γίνεται τῇ ἀκοῇ τὸ μέλος ἀκρι-  
 βέστερον. βέστερον'

= Anon §35 (MSS:ABCD)

1 τὸν] τὰ S 2 ἀλλὰ μελωδεῖται S ἀείδειν Anon 3 ἐκατέρα P  
 τέ codd (τὸ S), δὲ Anon (Bellermann) 4 χρειᾶ] + φευκτέον Anon (Najock, ex  
 Aristoxeno) ὅσῳ Anon (sed ὅσον olim coniecit Vincent) 5 γίνεταί Anon

80. Ἐπειδὴ τοίνυν ἀναγκαῖον ἐν P: ἐπειδὴ τοίνυν ἀναγκαῖον, ἐν  
 τῇ μελωδεῖν τὴν φωνὴν τὰς μὲν τῷ μελωδεῖν τὴν φωνὴν' τὰς μὲν  
 ἐπιτάσεις καὶ ἀνέσεις ἀφανῶς ἐπιτάσεις καὶ ἀνέσεις ἀφανῶς  
 ποιεῖσθαι, τὰς δὲ τάσεις αὐτάς ποιεῖσθαι, τὰς δὲ τάσεις φθεγγο-  
 5 μένας αὐτάς φανεράς καθιστᾶν μένας αὐτάς φανεράς καθιστᾶν'  
 (ἐπειδὴ περ τὸν μὲν τοῦ διαστή- ἐπειδὴ περ τὸν μὲν τοῦ διαστή-  
 ματος τόπον < > διεξέρχεται, ματος τόπον διεξέρχεται'  
 ὅτε μὲν ἐπιτελνομένη, ὅτε δὲ ὅτε μὴ ἐπιτελνομένη' ὅτε δὲ  
 ἀνιεμένη) καὶ λανθάνειν αὐτὴν ἀνιεμένη καὶ λανθάνειν αὐτὴν  
 10 δεῖ διεξιούσαν, τοὺς διεξιούσαν < > διεξιούσαν' [τοὺς διεξιούσαν]-  
τας φθόγγους τὰ διαστήματα ἐν- τας φθόγγους, τὰ διαστήματα ἐν-  
 ἀργεῖς τε καὶ ἐστηκότας ἀποδι- [ἀργεῖς] τέ καὶ ἐστηκότας ἀποδι-  
 δόναι, λεκτέον ἂν εἴη περὶ ἐπι- δόναι' λεκτέον ἂν εἴη περὶ ἐπι-  
 τάσεως τε καὶ ἀνέσεως, ἔτι δὲ τάσεως τε καὶ ἀνέσεως' ἔτι δὲ  
 15 ὀξύτητός τε καὶ βαρύτητος' πρὸς ὀξύτητά τε καὶ βαρύτητα' πρὸς  
 δὲ τούτοις τάσεως καὶ τῶν ἀκο- δὲ τούτοις τάσεως καὶ τῶν ἀκο-  
 λούθων. Ἐπίτασις μὲν οὖν ἐστὶ λούθων' ἐπίτασις μὲν οὖν ἐστὶ,

κίνησις τις φωνῆς συνεχῆς ἐκ  
βαρύτητος τόπου εἰς ὀξύτητα,  
 20 ἀνεσις δὲ < > ὀξυτέρα τόπου  
 εἰς βαρύτητα· ὀξύτης δὲ τὸ γί-  
νόμενον διὰ τῆς ἐπιτάσεως, τὸ  
 δὲ διὰ τῆς ἀνέσεως βαρύτης.

= Anon §36 (MSS:ABCD)

5 φθεγγομένην Anon(Najock, ex Aristoxeno), φθεγγομένη C, φθεγγομένους  
 ABD, φθεγγομένης S et P (ordine mutato uerborum) 7 τόπον] + ὃν A-  
 non (Bellermann, ex Aristoxeno) 8 μὲν] μὴ P 9 ἀνυμένη P καὶ om Anon  
 10 δεῦ S et Anon(Bellermann, ex Aristoxeno), δὲ ABCD, om P 10-11 διο-  
 ρίζοντας codd præter P qui δὲ, ὁρίζονται habuisse uidetur, δὲ ὁρίζον-  
 τας Anon(Richter, cf Bellermann) 11 φθόγγη S 15 ὀξύτητα et βαρύτη-  
 τα P 16 τάσεως] + τε S 17 ἐπίτασις] "Ἐπίτα εἰς S ut uidetur  
 18 τις P et AB, τῆς S et Anon(CD et Par 2532) φωνῇ P 19 βαρύτητος S,  
 βαρύτητα P ut uidetur, βαρυτάτου ABCD, βαρυτέρου Anon(Vincent) 20 δὲ]  
 + ἐξ Anon ὀξυτέρα P, ὀξύτητος S, ὀξυτέρου Anon 21-22 γενόμενον Anon

81. Ἐπιτείνοντες μὲν οὖν ὡς ἐπὶ P: |ἐπιτείνοντες μὲν οὖν, ὡς ἐπὶ  
 ὀργάνων εἶπεῦν τὴν χορδὴν, εἰς 22r ὀργάνω εἶπεῦν τὴν χορδάν, εἰς  
 ὀξύτητα αὐτὴν ἄγομεν, ἀνιέντες ὀξύτητα αὐτὴν ἄγομεν· ἀνυέντες  
 δὲ εἰς βαρύτητα. καθ' ὃν δὲ χρό-  
 5 νον ἄγομέν τε καὶ μετακινουμέν  
 τὴν χορδὴν εἰς ὀξύτητα, οὕτω  
 ἐστὶν < > ὀξύτης· γί-  
 νεται γὰρ καὶ μέλλει· ὁμοίως  
 δὲ καὶ ἡ βαρύτης. ἅμα γὰρ αἱ  
 10 κινήσεις παύονται, καὶ ἐπιφοιτᾷ  
 ἡ τε ὀξύτης καὶ ἡ βαρύτης· οὐ  
 γὰρ ἐνδέχεται τὴν χορδὴν ἅμα τε  
 κινεῖσθαι καὶ ἐστάναι.

= Anon §37 (MSS:ABCD)

2 ὀργάνων S et Anon(ACD), ὀργάνω P et B χορδάν P (post corr?), χορδᾶν  
 P (ante corr?) 3 ἀνυέντες P 5 τε om Anon 7 ἔστιν Anon(Najock)  
 ὀξύτης] ἡ ὀξύτης Anon, ὀξύτης ἢ βαρύτης P 7-8 γίνυται Anon, ὡς γίνυται S  
 8 μέλλει] + ἡ ὀξύτης γενέσθαι S, μέλη P 10-11 ἐπιφοιτᾷ ἡ ὀξύτης S, ἐπι-  
 φοιᾷται εὔτη ὀξύτης P

82. Διαφέρει οὖν ἀλλήλων τάδε  
ὥς τὸ ποιοῦν τοῦ ποιουμένου.

= Anon §38 (MSS:ABCD)

2 ποισύντου (*sic*) P

P: διαφέρει οὖν ἀλλήλων τάδε·  
ὥς τὸ ποισύντου ποιουμένου·

83. Τάσις δέ ἐστι μονή τις καὶ  
στάσις τῆς φωνῆς. τότε δέ λέγο-  
μεν ἐστάναι τὴν φωνήν, καίτοι  
τῆς φωνῆς κινήσεως οὐσης, ὅταν  
5 ἡμῶν ἡ αἰσθησις αὐτὴν ἀποφῆνῃ  
μήτ' ἐπὶ τὸ ὀξύ μήτ' ἐπὶ τὸ βαρὺ  
ὀρμῶσαν. ἐν μὲν γὰρ τῷ διαστήμα-  
τι λέγουσι· ἂν κινεῖσθαι ἡ φωνή,  
ἵσταται δὲ ἐν τῷ φθόγγῳ. ἄλλως  
10 οὖν λέγεται ἡρεμία φωνῆς παρὰ  
μουσικοῦ καὶ κίνησις, καὶ ἄλ-  
λως παρ' ἄλλοις.

= Anon §39 (MSS:ABCD)

P: τάσις δέ ἐστὶ μόνη τῆς κατὰ-  
στασις τῆς φωνῆς <

> κινήσεως οὐς[ης ὅτ]αν

ἡμῶν ἡ αἰσθησις αὐτὴν ἀποφῆνῃ·  
μη[τ' ἐπὶ τ]ὸ ὀξύ· μήτ' ἐπὶ τὸ βαρὺ  
ὀρμώσης· ἐν μὲν γὰρ τῷ διαστήμα-  
τι λέγεται· ἂν κινεῖσθαι ἡ φωνή·  
ἵσταται δὲ ἐν τῷ φθόγγῳ· ἀλλ' ὥς  
οὖν λέγεται ἡρεμία φωνῆς παρὰ  
μουσικῆς καὶ βύνης καὶ ἄλ-  
λους παράλλους·

1-2 μόνη τῆς κατὰστασις P, μονή τις καὶ φάσις S, μονή τις καὶ στάσις Anon  
2 τότε - 4 φωνῆς om P 6 ἐπὶ τοξύ S ut videtur 7 ὀρμώσης P 9 ἀλλ' ὥς P  
10-11 παρὰ μουσικοῦ S et Anon(D), παρὰ μουσικῆς P et C, περὶ μουσικοῦ S,  
περὶ μουσικῆς B 11 βύνης P 11-12 ἄλλους P

84. Ἐπίτασις μὲν γὰρ καὶ ἀνεσις  
κίνησις φωνῆς, τάσις δὲ καὶ ἡρε-  
μία διαφέρει ὀξύτητος καὶ βαρύ-  
τητος.

= Anon §40 (MSS:ABCD)

P: ἐπίτασις μὲν γὰρ καὶ ἀνεσις,  
κίνησις φωνῆς· τάσις [...ή]ρε-  
μία διαφέρει ὀξύτητα· καὶ βαρύ-  
τητα·

1 ἀνεσις P 2-3 καὶ ἡρεμία codā, ἡρεμία καὶ Anon(Bellermann), de P dubi-  
tandum (accentus tantum acutus cernitur quem interpretari non ausus sum)  
3-4 ὀξύτητα et βαρύτητα P

85. Ἐπ' ἀμφοτέρων γὰρ ἢ τε στά-  
σις καὶ ἡ τάσις θεωρεῖται.

= Anon §41 (MSS:ABCD)

P: ἐπαμ[φοτέρων γὰρ ἢ τε] στά-  
σις καὶ ἡ τάσις θεωρεῖται

2 ἡ om Anon post θεωρεῖται non distinguit P

86. Τῆς μουσικῆς ἐπιστήμης πο- P: τῆς μουσικῆς ἐπιστήμης πο-  
λυμεροῦς ὑπαρχούσης μέρος ἐστὶν <sup>22v</sup> λυμεροῦς ὑπαρχούσης μέρος ἐστὶν  
ἡ ἁρμονικὴ, διαιρεθεῖσα εἰς τρό- ἡ ἁρμονικὴ διαιρεθεῖσα. εἰς τρό-  
πους πεντεκαίδεκα, ὧν πρῶτος λύ- πους πεντεκαίδεκα· ὧν πρωτολύ-  
διος. διος·

= Anon §66 (MSS:ABC)

2 ὑπαρχούσης] + ἥς ABC 4-5 πρωτολύδιος P

87. Λυδίου δὲ τρόπου σημεῖα, τὰ P: λυδίου δὲ τρόποι σημεῖα· τὰ  
μὲν ἄνω τῆς λέξεως, τὰ δὲ κάτω μὲν, ἄνω τῆς λέξεως· τὰ δὲ, κάτω  
τῆς κρούσεως· τῆς κρούσεως·  
προσλαμβανόμενος· ζ ἑλλιπὲς προσλαμβανόμενος ζ ἑλιπὲς  
5 καὶ ταῦ πλάγιον. καὶ ταῦτα πλάγιον·  
ἡ δὲ σχηματογραφία αὐτῶν καὶ τὰ ἡ δὲ σχηματογραφία αὐτῶν, καὶ τὰ  
ὀνόματα ἐγράφη ἐκάστης χορδῆς ὀ- ὀνόματα ἐγράφει ἐκάστης χορδῆς ὀ-  
πισθεν, ὅτε περὶ τόνων τὸν λόγον πισθεν ὅτε περὶ τόνων τῶν λόγον  
ἐποιούμεθα· ἀλλ' εἵπωμεν δὴ καὶ ἐποιούμεθα· ἀλλ' εἵπομεν δὴ καὶ  
10 τὰ ἐπίλοιπα. τὰ ἐπίλοιπα·

1-5 = Anon §67 init (MSS:ABC)

1 δὲ om Anon τρόπου S et Anon, τρόποι P 4 ἑλλιπὲς Anon, ἑλλιπὲς S,  
ἐλιπὲς P 5 ταῦ Anon, ταῦτα P, T S post 5 ea quae §11 inuenies una  
cum notis musicis exscripsit S 6-10 non habet S 8 τόνων τὸν scripsi,  
τόνων τῶν P (sed ante corr non videtur habuisse; quod ipse in scribendo  
correxuit), τὸν αὐτῶν Najock(pp.XIV et 20), quem olim secutus sum 7 ἐγρά-  
φη et 9 εἵπωμεν scripsi

#### NOTES:

- \* 1. For lines 1-5, cf. §11, note 1.
- \* 2. The reference in 6-9 must be due to the Byzantine 'redactor' who gave the Hagiopolites compilation its actual shape.

88. Διπλοῦς γὰρ ὁ χαρακτήρ τῶν P: διπλοῦς γὰρ ὁ χαρακτήρ τῶν  
φθόγγων εἴληπται, ἐπειδὴ καὶ δι- φθόγγων εἴληπται· [ἐπειδὴ] καὶ δι-  
πλὴν ἔχει τὴν χρῆσιν - ἐπὶ λέξεως πλὴν ἔχει τὴν χρῆσιν· ἐπιλέξεως  
δὴ καὶ κρούσεως - καὶ ὅτι ἐν τοῖς δ[ὴ καὶ κ]ρούσεως· καὶ ὅτι ἐν τοῖς  
5 ᾄσμασι ποτε μεσολαβεῖ καὶ κῶλα, ᾄσμασι ποτὲ μεσολαβεῖ καὶ κῶλα,

καὶ διαφόρῳ χαρακτηῖρι τότ' ἀνάγκη  
 χρῆσασθαι· ἰδίαν γὰρ ἀρχὴν τῆς  
 ἀναγνώσεως λήψεται τὸ μέλος, καὶ  
 καταμηνύει ὡς ἐν κρούσει τὴν χρῆ-  
 10 σιν ἔχει, καὶ ὅτι οὐ ῥητῷ περι-  
λέληπται ἢ στίξιν, ἀλλ' ἔστιν ἡ  
 παρελκυσμὸς μέλους κατὰ τὰς τοῦ  
 ῥητοῦ συλλαβὰς ἢ μεταβολὴ ἐπὶ  
 κῶλον μεσολαβοῦν ἢ ἐπαγόμενον.  
 15 καὶ τὰ μὲν ἀνωθεν τῆς λέξεως 17r  
 - διὰ γὰρ φωνῆς ἀνωθεν ἡ λέξις  
 μόνης - τὰ δὲ τῆς κρούσεως κάτω-  
 θεν, διὰ χειρῶν.

= Anon §68 (MSS:ABC)

καὶ διαφόρῳ χαρακτηῖρι τότ' ἀνάγκη  
 χρῆσασθαι· ἰδίαν γὰρ ἀρχὴν τῆς  
 ἀναγνώσεως λήψεται τὸ μέλος καὶ  
 καταμηνύει ὡς ἐν κράσει τὴν χρῆ-  
 σιν ἔχει· καὶ ὅτι οὐ ῥητῷ περι-  
 λέληπται ἢ στίξιν· ἀλλ' ἔστι ἡ  
 παρελκυσμὸς μέλους κατὰ τὰς τοῦ  
 ῥητοῦ συλλαβὰς ἢ μεταβ[ολὴ ἐ]πὶ  
 κῶλον μεσολαβοῦν· ἢ ἐπα[γόμενον·  
 καὶ τὰ] | μὲν ἀνωθεν τῆς λέξεως·  
 διὰ γὰρ φωνῆς ἀνωθεν ἡ λέξις  
μόνη· τὰ δὲ τῆς κρούσεως κάτω-  
 θεν διὰ χειρῶν

1 γὰρ non habent S et Anon 4 δὴ] γὰρ S et Anon 9 κράσει P

10-11 περιλέληπται P, περιεῖληπται S, παραλέληπται C, παραλέλειπται Anon(AB)

12 παρελκυσμένον S 14 μεσολαβοῦσα S 17 μόνη P post 18 non dist P

#### NOTES:

- \* 1. In the addition of γὰρ in P (line 1) we recognize once more the 'redactor's hand; the word serves as a link between §88 and §87,9-10.

89. Φθόγγοι καθ' ἕκαστον πάντα P: φθόγγοι καθ' ἕκαστον τρόπον  
 τρόπον μελωδοῦμενοί εἰσιν ὀκτω- πάντα μελωδοῦμενοι, εἰσὶν ὀκτω-  
 καίδεκα. καίδεκα + +

= Anon §69 init (MSS:ABC)

1-3 litteris rubris scripsit S τρόπον πάντα P ὀκτοκαίδεκα] IH S

XXIII 90. Τὰ μέλη ἢ ἀπλῶς ἢ κατὰ σύγ- P: Τὰ μέλη ἢ ἀπλῶς ἢ κατασύγ-  
 κρασιν κρουομένων τῶν φθόγγων κρασιν κρουομένων τῶν φθόγγων  
 ἐξηχεῖται· ἡ δὲ σύγκρασις γίνε- ἐξηχεῖται· ἡ δὲ σύγκρασις γίνε-  
 ται συμφώνων ἢ διαφώνων κρουομέ- ται· συμφώνων ἢ διαφώνων κρουομέ-  
 5 νων. καὶ τὴν μὲν τῶν διαφώνων νων· καὶ τὴν μὲν τῶν διαφώνων  
 σύγκρασιν φρεῖγμα καλοῦσι, τὴν δὲ σύγκρασιν φρεῖγμα καλοῦσι· τὴν δὲ  
 τῶν συμφώνων συμφωνίαν· καὶ λαμ- τῶν συμφώνων, συμφωνίαν· καὶ λαμ-

- βάνεται ἐπὶ μὲν τῶν ἀσμάτων κρᾶ- βάνεται ἐπὶ μὲν τῶν ἀσμάτων, κρᾶ-  
 σις μόνη σύμφωνος, ἐπὶ δὲ τῶν σις μόνη σύμφωνος· ἐπὶ δὲ τῶν  
 10 μελῶν ἀμφότερα. μελῶν ἀμφότερα·

3 ἐξήχεται S 6 φρᾶγμα PS, φρύαγμα coniecit Vincent 10 μερῶν (vel με-  
 λῶν?) secundum Vincent habet P, sed est μελῶν (etiam in S) ἀμφότερα PS,  
 ἀμφοτέρω coniecit Vincent

#### TRANSLATION:

90. The melodies are made in such a way that the tones are produced either single or mixed, the mixture being either of consonant or of dissonant tones. The mixture of dissonant tones is called Phragma (?), the other is Symphonia. In songs, only consonance is accepted, in (instrumental) melodies both.

#### NOTES:

- \* 1. §§90-03 constitute Vincent's Fragment I (Notice... pp.260-63).
- \* 2. In line 6 (and in §§91-93 *passim*) Vincent corrects the strange φρᾶγμα of P (and of S!) into φρύαγμα. For the time being I have kept the reading of the two manuscripts; it may be an otherwise unknown *terminus technicus*.
- \* 3. 'Αμφότερα in 14 is somewhat loose, but not necessarily to be corrected.

91. Τῆς δὲ διαπασῶν ὁ μὲν πρῶτος P: τῆς δὲ δ[ια]πασῶν ὁ μὲν πρῶτος  
 φθόγγος δύο συμφώνους κράσεις φθόγγος, δύο συμφῶνους κ]ράσεις  
 δέχεται καὶ τέσσαρα φράγματα. δέχεται, καὶ τέσσαρα φράγματα·  
 καὶ ὁ δεύτερος δύο συμφώνους  
 5 καὶ τέσσαρα φράγματα· ἀλλὰ τὸ ἀλλὰ τὸ  
 μὲν <ἐν> φρᾶγμα ταυτό ἐνὶ τῶν μὲν φρᾶγμα ταυτό ἐπὶ τῶν  
 προειρημένων, τὰ δὲ τρία διάφορα. προειρημένων· τὰ δὲ τρία διάφορα·  
 ὁ δὲ τρίτος συμφωνίαν μίαν καὶ ὁ δὲ τρίτος, συμφωνίαν μίαν καὶ  
 τέσσαρα φράγματα· ὁ δὲ τέταρτος τέσσαρα φράγματα· ὁ δὲ τέταρτος,  
 10 <κατὰ ἀγωγήν συμφωνίαν μίαν καὶ> ἀντιστρόφως κατὰ ἀνάλυσιν μίαν  
 καὶ τρία φράγματα· ὁ δὲ πέμπτος καὶ τρία φράγματα· ὁ δὲ πέμπτος  
 ὁμοίως ἀντιστρόφως συμφωνίας δύο ὁμοίως ἀντιστρόφως συμφωνίας δύο  
 καὶ φράγματα κατὰ ἀνάλυσιν δύο καὶ φράγματα κατὰ ἀνάλυσιν δύο·  
 15 καὶ κατὰ ἀγωγήν δύο. κα[ὶ] κατὰ ἀ]γ[ω]γήν δύο·

2 συμφώνους S, συμφώνων coniecit Vincent 2 κράσεις coniecit Vincent,  
 κράσις PS 3 φρυάγματα coniecit Vincent 4 καὶ - 5 φράγματα per homoeo-  
 teleuton om P, habet S, ὁ δὲ δεύτερος δύο συμφωνίας καὶ τέσσαρα φρυάγμα-  
 τα eleganter suppleuit Vincent 6 ἐν suppleui (πρῶτον Vincent)

ἐνὶ scripsi, ἐπὶ PS, ἐστὶ voluit Vincent 10 lacunam suppleui eodem fe-  
re modo atque Vincent (p 261 not 3) 11 ἀνάκλησιν et 12 φρυάγματα con-  
iecit Vincent 13 an ἀντιστρόφως delendum? συμφωνίας PS, correxit Vin-  
cent

# TRANSLATION:

91. The first tone of the octave (a G F E D C B) admits two consonances (a-E and a-D) and four dissonances (a-G, a-F, a-C, a-B). The second tone (G), too, admits two consonances and four dissonances: one of these (G-a) is the same as one of the aforementioned (a-G), three are different. The third tone (F) has one consonance (F-C) and four dissonances. The fourth (E) has one consonance upwards (E-a) and, conversely, one downwards (E-B), and three dissonances. In a similar way, but oppositely, the fifth tone (D) has two consonances, but two dissonances downwards (D-C and D-B) and two upwards (D-E and D-F).

# NOTES:

- \* 1. The number of intervals is not constant: if a is used as base, there are 6 (2+4), G also gives 6 (2+4), but for F the figure is 5 (1+4), for E 5 (1+1+3), and for D 6 (2+2+2).
- \* 2. Commenting on P's omission of lines 4-5, Vincent rightly points out "que le manuscrit de l'Hagiopolite fourmille de ces omissions par ὁμοιοτέλευτον". On the strength of this observation one might be inclined to follow Vincent's reconstruction of lines 9-12 and to supply as follows:  
ὁ δὲ τέταρτος ἀντιστρόφως κατὰ <ἀγωγήν συμφωνίαν μίαν καὶ κατὰ> ἀνάλυσιν μίαν καὶ τρία φράγματα.  
This, however, raises a problem; the function of the adverb ἀντιστρόφως. One possible solution would be that ἀντιστρόφως in line 13 is an inter-linear gloss on ὁμοίως, and that the adverb in its earlier occurrence serves to juxtapose the consonances κατὰ ἀγωγήν and κατὰ ἀνάλυσιν.
- \* 3. In line 6, the common error of P and S seems to be a "majuscule error" (ENI > EHI).

92. Προσληφθείσης δὲ τῆς δευτέ- P: προσλειφθείσης δὲ τῆς δευτέ-  
ρας διαπασῶν συμφωνίας ἄλλα προσ-17νρας | διαπασῶν συμφωνίας, ἀλλὰ προσ-  
τίθενται κράματα, τῆς τε διαπα- τίθενται· κρατήματα τῆς τε διαπα-  
σῶν καὶ μετ'αὐτὴν τῆς διατεσσά- σῶν· καὶ μετ'αὐτὴν τῆς διατεσσά-  
5 ρων καὶ διαπέντε καὶ δις διαπα- ρων καὶ διαπέντε· καὶ δις διαπα-  
σῶν· τὰ δὲ ἄλλα φράγματά εἰσι σῶν· τὰ δὲ ἄλλα φράγματα εἰσὶ  
ταυτά, τάσει διαφέροντα. ταυτά τάσει διαφέροντα·

2 συμφωνίαν S ἀλλὰ PS, correxit Vincent 3 κράματα S, κρατήματα P,  
correxit Vincent 5 διαπέντε] ε S 6 post δις διαπασῶν lacunam suspi-  
catus est Vincent 7 ταῦτα S φρυάγματα Vincent

## TRANSLATION:

92. If the second octave is added (to the one analyzed in §91), other mixtures arise, such as octave, octave + fourth, octave + fifth, and double octave. But the new dissonances are not different (from those described in §91), except in their extension (i.e. the ambitus, because of the added octave).

- |   |  |
|---|--|
| <p>93. Πρὸς τὴν τῶν ἀσμάτων κροῦ-<br/>         σιν λυσιτελεστέρα ἢ διαπασῶν,<br/>         κράσει συμφωνιῶν περιττεύουσα<br/>         καὶ πλεονεκτοῦσα καὶ τοῖς κομ-<br/>         5 πισμοῖς ἰδικῶς. τριττὴ δὲ τού-<br/>         των ἡ διαφορὰ· ἢ γὰρ βαρειῶν<br/>         πρὸς βαρείας, ἢ βαρειῶν πρὸς<br/>         ὀξείας, ἢ ὀξειῶν πρὸς ὀξείας.<br/>         οἱ δὲ εἴ τῶν τρόποι διαφέρουσιν ἕ-<br/>         10 καστος ἐκάστου ἀπέχοντες τῇ δι-<br/>         ατεσσάρων συμφωνίᾳ.</p> | <p>P: πρὸς τὴν τῶν ἀσμάτων κροῦ-<br/>         σιν, λυσιτελέστερα ἢ διαπασῶν<br/>         κράσει συμφωνιῶν περιττεύουσα·<br/>         καὶ πλεονεκτοῦσα καὶ τοῖς κομ-<br/>         πισμοῖς, ἰδικῶς· τριττὴ δὲ τού-<br/>         των ἡ διαφορὰ· ἢ γὰρ βαρειῶν<br/>         πρὸς βαρείας, ἢ βαρειῶν πρὸς<br/>         ὀξείας, ἢ ὀξειῶν πρὸς ὀξείας·<br/>         οἱ δὲ τῶν τρόποι διαφέρουσιν ἕ-<br/>         καστος, ἐκάστου ἀπέχοντες τῇ δι-<br/>         ατεσσάρων συμφωνίᾳ.]</p> |
|---|--|

1 κροῦσιν] οὖν κράσιν S    4 καὶ<sup>1</sup> om S (in fine lineae)    5 τρίτη S  
 7 προβαρείας et 7-8 προὐξείας S    9 δὲ εἴ ] δεκαπέντε S

## TRANSLATION:

93. For the accompaniment of songs, the octave is more useful. This is due to its larger mixture of consonances, especially in the *Kompismoi*. Of these (i.e. the *Kompismoi*?) there are three different kinds: low tones go with low, or low with high, or high with high. As regards the fifteen Tropoi, these differ from each other in so far as they are situated at fourth distances (?).

## NOTES:

- \* 1. The reading of S in 1-2 (οὖν κράσιν for κροῦσιν) reflects an inter-linear correction in an ancestor manuscript:  
       οὖ  
       κράσιν
- \* 2. For κομπισμός (= repetition of tone at same pitch), see Najock 1972, pp.162-63 and 172-74.
- \* 3. Vincent seems to have understood τούτων in 5-6 as referring to the κράματα in §92,3. Why not to the percussional *Kompismoi*?
- \* 4. Vincent's rendering of lines 9-11 makes the connection with the preceding more intimate than it is in the original: "Et, à ce propos, il est bon de rappeler que les 15 tropes se dépassent mutuellement trois à trois par intervalles de quarte".

XXIV 94. Φρυγῶν δὲ εὖρημά φασιν εἶναι P: [φρ]υγῶν δὲ εὖρημα φασὶν εἶναι  
 τὸν αὐλόν, διὰ τὸν Μαρσύαν καὶ τὸν αὐλόν· διὰ τὸν μαρσίαν καὶ  
 "Ὀλυμπον†καὶ Σάτυρον†· εἰσὶ γὰρ ὄλυμπον καὶ σάτυρον· εἰσὶ γὰρ  
 οὗτοι Φρύγες. οὗτοι Φρύγες·

1 δὲ om S 2 μαρσίαν P, μαρσίης S 3 locus fortasse corruptus; an τὸν  
 σάτυρον vel καὶ "Υαγνιν legendum? vide annotationem

#### TRANSLATION:

94. It is said that the Aulos was invented by the Phrygians. For Marsyas, Olympos, †and Satyros† were Phrygians.

#### NOTES:

- \* 1. §§94-95 constitute Vincent's Fragment II (Notice ... pp.262-65).
- \* 2. Marsyas and Olympos are well known Phrygians connected with the origin of auletics. Satyros is not known in this connection; but Marsyas and his father Hyagnis were Satyrs! One feasible emendation would therefore be to see the σάτυρον of P and S as a gloss in their model manuscript, explaining the name "Υαγνιν. But it may also be that the text originally spoke of "Ὀλυμπον τὸν Σάτυρον - to distinguish him from ὁ Πιερικὸς "Ὀλυμπος, the shepherd mentioned in §95,7-20.

<p>95. Σύριγγος εἶδη δύο· τὸ μὲν        γὰρ ἐστὶ μονοκάλαμον, τὸ δὲ πολυ-        κάλαμον· ὃ φασιν εὖρημα Πανὸς        τοῦ Αἰθέρος καὶ νύμφης Οἰνός.        5 καὶ ὁ μὲν μῦθος οὕτως, ὁ δὲ φυ-        σικὸς λόγος τοιοῦτος·        Κατὰ τὸν Πιερικὸν "Ὀλυμπον καλα-        μῶνος ἀποξηρανθέντος ἀποθραυσθεῖς        δόναξ εἰς συριγκοειδῆ χεῖλωσιν        10 ὑπὸ τοῦ εἰσρέοντος ἀνέμου διὰ        τῆς χειλώσεως λιγυρὸν ἦχον ἀπε-        τέλει. οὐπερ ὁ ποιμὴν ἀκούσας        ᾗσθη, καὶ τοῦτον ἐκτεμῶν προση-        νές τι καὶ ἐπακτικὸν ἀπεσύριζεν.        15 ὁμοίῳ δὲ τρόπῳ καὶ ἄλλους ὄργα-        νοποιησάμενος τοὺς ἀναλογίαν ἔ-        χοντας πρὸς τὸν εὐρημένον φθόγγον        ἡρμόσατο· καὶ ποιήσας πεντασύ-        ριγγον ἐξηλώθη παρὰ τῶν ἄλλων</p>	<p>P: σύριγγος εἶδη δύο· τὸ μὲν        γὰρ ἐστὶ μονοκάλαμον· τὸ δὲ πολυ-        κάλαμον· ὃ φασὶν· εὖρημα παντός        τοῦ αἰθέρους καὶ νύμφης οἰνός        καὶ ὁ μὲν μῦθος οὕτως· ὁ δὲ φυ-        σικὸς λόγος τοιοῦτος        κατὰ τὸν πιερικὸν ὄλυμπον καλα-        μῶ[νος] ἀποξηρανθέντος ἀποθραυ[σθεῖς        δόναξ]· εἰς συριγκοειδῆ χεῖλωσιν,        18x ὑπὸ τοῦ εἰσρέοντος ἀνέμου, διὰ        τῆς χειλώσεως, λιγυρὸν ἦχον ἀπε-        τέλει· οὐπερ ὁ ποιμὴν ἀκούσας        ᾗσθη· καὶ τοῦτον ἐκτεμῶν, προση-        νές τι καὶ ἐπακτικὸν ἀπεσύριζεν·        ὁμοίῳ δὲ τρόπῳ καὶ ἄλλους ὄργα-        νοποιησάμενος τοὺς ἀναλογίαν ἔ-        χοντας, πρὸς τὸν εὐρήμενον φθόγγον        ἡρμώσατο· καὶ ποιήσας πεντασύ-        ριγγον, ἐξηλώθη παρὰ τῶν ἄλλων</p>
--	--

- 20 ποιμένων. εἴτα τούτοις ἔντιμος  
ἢ χρήσις γινομένη καὶ τοῖς λοι-  
ποῖς ἀγροῖκοις, ὕστερον καὶ ἐν-  
ταῦς πολιτικαῖς ἀπολαύσεσι παρε-  
λαμβάνετο. οἱ δὲ τότε Μακεδόνων  
25 βασιλεῖς ἐπὶ τὰ βασίλεια μετή-  
νεγκον αὐτῶν τὴν χρήσιν, ὥστε  
μέλος ἐπικαλεῖσθαι Μακεδονικόν.  
Μετὰ δὲ τοῦτο Ἄττις τὸ δεκακά-  
λαμον αὐλοποιήσας ποιμενικὴν ἐ-  
30 κάλει σύριγγα, ποιήσας τὸ <ν> μὲν  
πρῶτον δεκαδάκτυλον· καὶ δακτύλῳ  
ἀφελῶν ἕως τεσσάρων, τοὺς λοιποὺς  
ἰσομήκεις ἑξαδακτύλῳ χειλῶσας,  
†τηρήσας τῇ τῶν παχῶν διαφορᾷ  
35 τὴν τομὴν,† τὰ βουκολικὰ καὶ αἰ- 18ν  
πολικά παρὰ τὸν Σαγγάριον ποτα-  
μὸν ἐσύρισε.

ποιμῶν· εἴτα τούτοις ἔντιμος  
ἢ χρήσις γινομένη· καὶ τοῖς λοι-  
ποῖς ἀγροῖκοις· ὕστερον καὶ ἐν-  
ταῦς πολιτικαῖς ἀπολαύσεσι, παρε-  
λαμβάνετο· οἱ δὲ τότε μακεδόνων  
βασιλεῖς ἐπὶ τὰ βασίλεια μετή-  
νεγκ[ον] αὐτῶν τὴν χρήσιν καὶ τὸ  
μέλος αὐτῶν, ἐπικαλεῖσθαι μακεδόνιον·  
μετὰ τοῦτο ἄττις τόδε κά-  
λομον αὐλοποιήσας ποιμενικὴν ἐ-  
κάλει σύριγγα· ποιήσας τὸ μὲν  
πρῶτον, δεκαδάκτυλον· καὶ δακτύλῳ  
ἀφελῶν· ἕως δὲ τοὺς λοιπούς  
ἰσομήκεις ἐ[ξαδακτ]ύλῳ χειλῶσας,  
τηρήσας τῇ τῶν πη[χῶν διαφορᾷ] ᾧ  
τὴν τομὴν, τὰ βουκολικὰ· καὶ αἰ-  
πολικά παρὰ τὸν σύριγγον ποτα-  
μὸν, εὐσηρήσαι·

1 σύριγγος S, fortasse recte 3 εὔρεμα S παντὸς P 4 αἰθέρους P  
7 Πιερικὸν Vincent, πιέρικνόν P, ἐπὶ ὀρύκον S ut videtur 7-8 καλαμῶ-  
νος scripsi, καλαμόνος S, καλαμ[ ] P, καλάμου Vincent 8-9 ἀποθραυ-  
σθεῖς δόναξ S, ἀποθραυ[ ] P, ἀποθραυσθέντος τε coniecit Vincent 9 συ-  
ριγγοειδῆ Vincent κουλῶν maluit Vincent 13 ἦσθη Vincent, ἦσθη PS  
14 ἐπακτικῶν S 15-16 ὀργανοποιησάμενος P et Vincent, ὀργανοποιησάμενος S  
16-17 ἔχοντες S 18 ἡρμόσατο Vincent, ἡρμώσατο P, ἡρμωσε S 18-19 παν-  
τασύριγγον S ante correcturam (correxuit ipse) 20 ποιμῶν P 21 γενο-  
μένη S 25 βασιλεῖς] ἡσθέντες βασιλεῖς S 25-6 μετήνεγκ[αν αὐτῶν] sup-  
pleuit Vincent 26 ὥστε S, καὶ τὸ P 27 μέλος] + αὐτῶν P (et S supra lin)  
καλεῖσθαι S μακεδόνιον P, μακεδόνιον Vincent 28 δὲ om P 28-29 τὸ δέ-  
κα κάλαμον αὐλοποιήσας S, τόδε κάλομον αὐλοποιήσας P, τὸν δεκάλαμον αὐλὸν  
ποιήσας coniecit Vincent ( p 264 n 1), fortasse τὸν δεκακάλαμον αὐλὸν ποι-  
ήσας scribendum 29 ποιμενικὸν S 30 σύριγγα S post correcturam  
τὸν μὲν coniecit Vincent, τὸ μὲν PS 31 δακτυλον Perne, δακτύλ[ους] Vin-  
cent 32 τεσσάρων S, δὲ P et Vincent 33 ἑξαδακτύλῳ S, ἐ[ν] ἐκάστῳ ἐσχη-  
κέναι αὐ]λῷ coniecit Vincent 34 τηρεῖσθαι S τῇ τῶν] τ' αὐτῶν coniecit  
Vincent. 34-35 παχῶν διαφορᾷ τὴν τομὴν scripsi, παχῶν διαφορὰ τὴν τομὴν S,  
πη[ ] ᾧ τὴν τομὴν P, πη[λκρότητα καὶ] τομὴν coniecit Vincent 36 σαγγά-  
ριον S, σύριγγον P, Σύριγγον Vincent 37 ἐσύρισε coniecit Vincent, ἐσύ-  
ρισαν S, εὐσηρήσαι P

## TRANSLATION:

95. Of the *Syrinx* (*the shepherd's pipe*) there are two kinds: one of them consists of a single reed, the other of many. It is told that the latter was invented by Pan, son of Aither and the nymph Oenoe. But that is legend! The following is what really happened: In the days of the *Pierian Olympus*, a bed of reeds had dried up; a pole-reed had been broken with a rim like those of a *Syrinx*, and when the wind streamed across the edge, the reed gave forth a clear and sweet sound. Hearing this sound, the shepherd was delighted, cut off the reed, and produced a sound which was both soft and attractive. Having made other pipes after a similar fashion, he used those which conformed with the tone already found and made a five-reed *Syrinx* - for which he was zealously admired by his fellow shepherds. Later-on, the use (*of this instrument*) was honoured among the shepherds and the other peasants, and at last it was used for enjoyment in the towns as well. The Macedonian kings at the time introduced these instruments into their palace, whence the expression '*Macedonian Melos*' is derived. Afterwards, Attis constructed the 'ten-reeder' and called it 'a shepherd's *Syrinx*'. He made its first reed ten fingers long, the next three were shortened by one finger's length each, and the rims of the remaining reeds were cut in such a way that they had the same length as the one which was six fingers long, ..... Having done all that, he played the tunes of cowherds and goatherds on his *Syrinx* at the banks of the *Sangarios* River.

## NOTES:

- \* 1. The *Syrinx* was probably spelled with -γκ- in the model of S and P, cf. S in line 1, P and S in 9, S in 30, and P in 36.
- \* 2. In line 25, the ἡσθέντες of S may have been an interlinear gloss in the model MS, to explain why these kings introduced a rural instrument into their palace. I have taken the αὐτῶν of S and P in 27 to be another gloss. Cf. also §94, note 2.
- \* 3. I hesitate as to the αὐλοποιήσας in 29. It may be a mistake, called forth by ὀργανοποιησάμενος in 15-16. Curiously enough, there is a compound word of the same type in §17,7-8 (σωματοποιηθῆναι). Is this a coincidence?
- \* 4. I still do not understand the details of Attis's δεκακάλαμον (28-35). Anyhow, the ἐξαδακτύλῳ of S in 33 in all likelihood takes us somewhat nearer to an understanding than Vincent was in 1847: Attis's instrument seems to have consisted of ten reeds, not of one reed with many holes.

96. πᾶν δὲ ἁρμονικὸν διάστημα ὀριζόμενον αἰσθήσει τῇ δι' ἀκοῆς πέντε διαφοραῖς ὀργάνων ἀποκτυ- πεῖται φυσικῶς· διὸ καὶ εἰς πέν-	P: πᾶν δὲ ἁρμονικὸν διάστημα ὀριζόμενον αἰσθήσει τῇ διακοῆς· πέντε διαφοραῖς ὀργάνων ἀποκτυ- πεῖται φυσικῶς· διὸ καὶ εἰς πέν-
5 τε μόνον καταδιήρηται τρόπους. ἔστι δὲ τὰ πέντε ὄργανα τάδε· σάλπιξ, αὐλός, φωνή, κιθάρα, πτερόν. ὀνόματα δὲ τῶν τρόπων· δῶριος, ὁ βαρύτατος, σάλπιγγος·	τε μόνον, καταδιείρηται τόπους· ἔστι δὲ τὰ πέντε ὄργανα, τάδε· σάλπιξ· αὐλός· φωνή· κιθάρα· πτερόν· ὀνόμα<α>τα δὲ τῶν τρόπων, δῶριος, ὁ βαρύτατος, σάλπιγξ·

- 10 φρύγιος, ὁ μετ'αὐτόν, αὐλῶν· φρύγιος ὁ μετ'αὐτῶν αὐλῶν·  
 λύδιος, ὁ καὶ μέσος, φωνῆς· λύδιος ὁ καὶ μέσος φωνῆς·  
 αἰόλιος, κιθάρας· αἰόλιος κιθάρας·  
 ἰάστιος, πτεροῦ· ἰάστιος πτερόν·  
 αἱ δὲ τῶν ὀργάνων τούτων ἐπὶ τὸ αἱ δὲ τῶν ὀργάνων τούτων ἐπὶ τὸ  
 15 μᾶλλον καὶ ἥττιον διαφοραὶ τὸ ὑπὸ μᾶλλον, καὶ ἥττιον διαφοραὶ τὸ ὑπὸ,  
 καὶ ὑπὲρ ἐκάστω χαρίζονται. καὶ ὑπὲρ ἐκάστω χαρίζεται· :-

3 an πέντε διαφόροις ὀργάνοις legendum? 5 διήρηται S τρόπους S et Vincent, τόπους P 9 ἢ S σάλπιγγος coniecit Vincent, σάλπιξ P et S  
 10 αὐτόν S et Vincent, αὐτῶν P αὐλόν in αὐλῶν (vel αὐλῶν in αὐλόν) correctit S 12 κιθάρα S 13 πτεροῦ S et Vincent, πτερόν P; fortasse πτεροῦν legendum 16 χαρίζονται scripsi, χωρίζονται S, χαρίζεται P et Vincent

#### TRANSLATION:

96. Every harmonic interval, as defined by hearing is made to resound by means of five different instruments. This is why it (*the Harmonics?*) is divided into five Tropoi, only. The five instruments are the following: The Salpinx (*trumpet*), the Aulos (*flute*), the human voice, the Kithara, the Pteron (*shepherd's pipe?*). The names of the Tropoi are:

Dorian, the lowest one, for the Salpinx  
 Phrygian, the one which comes next, for the flutes  
 Lydian, the middle, for the human voice  
 Aeolian, for the Kithara  
 Ionic, for the Pteron.

The differences between these instruments as to higher and lower pitch give the *hypo-* and the *hyper-* to each (*Tropos?*).

#### NOTES:

- \* 1. This paragraph is Vincent's Fragment III (Notice ... pp.264-267).
- \* 2. There are interesting parallels between §96 and the Anonymi II et III Bellermannii (Anon §§17 and 50, the latter = Hagiopolites §65).
- \* 3. For πτερόν (lines 8 and 13), see Vincent p.8, note 2.

XXV 97. 'Η σάλπιξ' τραγωδία· παπίας· P: 'Η σάλ[πι]ξ' τραγωδία· παπίας·  
 μεσότριτος· κιθαρωδία· λύρα· ὀξύ- μεσότριτος· κιθαρωδία· λύρα· ὀξύ-  
 τονον· κωμωδία· κιθάρα· δῶριος· τονον· κωμωδία· κιθάρα· δῶριος·  
 φρύγιος· πλυνθίων· σάλπιξ· αὐλός· φρύγιος· πλυνθίων· σάλπιξ· αὐλός·  
 5 ὕδραυλις· αἰόλιος· πτερόν· κιθάρα· ὕδραυλις· αἰόλιος· πτερόν· κιθάρα·  
 σύριξ· λύδιος· φωνή· ἰάστιος· πτε- σύριξ· λύδιος· φωνή· ἰάστιος· πτε-  
 ρόν. ρόν:-

4 πλυνθίων vel πληνθίων P 1-7 om S

## NOTES:

- \* 1. This is Vincent's Fragment IV (Notice...p.266). It is only transmitted in P.
- \* 2. As already suggested (§13 note 1) this strange list of instruments, genres, and modes may have been a marginal entry in the model manuscript. The bizarre order - which seems to elude any reasonable systematization - may perhaps be due to a peculiar (diagrammatic?) arrangement in the model of P.

XXVI 98. Ἀγωγή προσεχῆς ἀπὸ τῶν βα- P: Ἀγωγή προσεχῆς ἀπὸ τῶν βα-  
 ρυτέρων ὁδός, ἀνάλυσις διὰ τὸ ἐν- ρυτέρων, ὁδός [ἀν]ἀκλήσις διὰ τὸ ἐν-  
αντίον· ἡ κίνησις φθόγγων ἐκ βα- αντίον· ἡ κίνησις φθό[γγων ἐκ] βα-  
 ρυτέρου τόπου ἐπὶ τὸ ὀξύτερον, ρυτέρων τόπου, ἐπὶ τὸ ὀξ[ύτερον,  
 5 ἀνάλυσις δὲ τοῦναντίον. τὰς ἀγω-19r ἀνάλυσις] δὲ τοῦναντίον· τὰς ἀγω-  
 γὰς καὶ τὰς ἀναλύσεις δεῖ μελω- γὰς καὶ τὰς ἀναλύσεις δεῖ μελω-  
 δεῖν ἐκτείνοντας μᾶλλον καὶ μὴ δεῖν ἐκτείνοντας μᾶλλον καὶ μὴ  
 βραχύνοντας τοὺς φθόγγους· ἡ γὰρ βραχύνοντας τοὺς φθόγγους· ἡ γὰρ  
 ἔμμονος αὐτῶν καὶ ἐπιμηκέστερα ἔμμονος αὐτῶν καὶ ἐπιμηκέστερα  
 10 ἐκφώνησις ἀκριβεστέραν τῇ ἀκοῇ ἐκφώνησις· ἀκριβεστέρα τῇ ἀκοῇ  
 χαρίζεται τὴν κρίσιν. χαρίζεται τὴν κρίσιν:-

= Anon §78 (MSS:ABC)

2-3 ἀνάλυσις διὰ τὸ ἐναντίον S, ἀνάκλησις διὰ τὸ ἐναντίον P, ἀνάλυσις δὲ τὸ  
 ἐναντίον ABC, seclisit Anon(Bellermann) 3-4 βαρυτέρων P 7 ἐκτείνων  
 τὰς P ante correcturam (accentum grauem linea transversa deleuit ipse in  
 scribendo) 10 ἀκριβεστέρα P

## NOTES:

- \* 1. I have edited this paragraph after the principles applied to the other sections taken from the Anonymi Bellermanni (§§56 sqq.), my aim being to reconstruct the common ancestor of S and P.
- \* 2. In S, the text is found on fol. 95v, immediately after §89 (= Anon §69 init.).

XXVII 99. Προσλαμβανόμενος· ὁ κάτω P: Προσλαμβανόμενος, ὁ ὕ· κάτω  
 γραμμὴν ἔχον καὶ ἦτα. γραμμὴν ἔχον ἦ  
 ὑπάτη ὑπατῶν· μὲ ἀνεστραμμένον ὑπάτη ὑπατῶν π ἀνεστραμμένον  
 καὶ ἦ ἐλλιπές· καὶ ἡ ἐλιπές·  
 5 παρυπάτη ὑπατῶν· ᾱ ἀνεστραμμένον παρυπάτη ὑπατῶν ᾱ ἀνεστραμμένον  
 καὶ ἦ ἐλλιπές ὕπτιον· καὶ ἦ ἐλιπές ὕπτιον·  
 ὑπατῶν διάτονος· ζῆτα ἐλλιπές ὑπατῶν διάτονος, ζῆτα ἐλιπές  
 καὶ ταῦ πλάγιον· καὶ τὸν πλάγιον·

- ὕπάτη μέσων· γάμμα ἀνεστραμμένον  
 10 καὶ γάμμα ὀρθόν.  
 παρυπάτη μέσων· β̄ ἐλλιπές καὶ  
 γάμμα ἀνεστραμμένον.  
 μέσων διάτονος· φ̄ καὶ δίγαμμα.  
 μέση· στιγμή καὶ σίγμα.  
 15 τρίτη συνημμένων· ρ̄ καὶ σίγμα  
 ἀνεστραμμένον.  
 συνημμένων διάτονος· μϋ καὶ π̄  
 καθειλκυσμένον.  
 νήτη συνημμένων· ἰῶτα ὀρθόν καὶ  
 20 λ̄ πλάγιον.  
 παράμεσος· οϋ καὶ π̄.  
 τρίτη διεξευγμένων· ξ̄ καὶ κ̄ ἀν-  
 εστραμμένον.  
 διεξευγμένων διάτονος· ἰῶτα ὀρ-  
 25 θόν καὶ λ̄ πλάγιον.  
 νήτη διεξευγμένων· ζ̄ καὶ π̄ 19ν  
 πλάγιον.  
 τρίτη ὑπερβολαίων· ε̄ τετράγωνον  
 καὶ π̄ ἀνεστραμμένον.  
 30 ὑπερβολαίων διάτονος· ω̄ τετρά-  
 γωνον καὶ ζ̄.  
 νήτη ὑπερβολαίων· φ̄ πλάγιον καὶ  
 ἥτα ἀμελητικόν.

= Alypi genus diatonum cap 2 (Jan p 370)

- 1 praeef 'Υπολυδίου σημεία κατὰ τὸ διάτονον γένος Alyp, ὑπολυδίου τρόποι, ση-  
 μεῖωσαι κατὰ τὸ διάτονον γένος S (colore rubro) δ̄ ] ου Alyp, φ̄ S (o supra  
 lin addita) 2 καὶ om P ἥτα] η̄ P (*Talia passim inuenies, videsis  
 textum quem e codice P supra transscripsimus*) 3 ὑπάτων Alyp, ὑπάτων S  
 4 η̄ ἐλλιπές] ἡ ἐλιπές P, νϋ ὁμοίως S ἐλλειπές Alyp (etiam in seqq; ἐ-  
 λιπές semper P) 5 ὑπάτων Alyp, ὑπάτων S ᾱ ] λάβδα Alyp (sed ἄλ-  
 φα cod M) 6 η̄ ἐλλιπές ὕπτιον] νϋ πρηνές S ὕπτιον] πλάγιον Alyp  
 7 ὑπάτων Alyp (sed ὑπάτων hic habet S) 8 ταϋ] τὸν P 9 γάμμα] β̄ γ̄ P  
 ἀνεστραμμένον Alyp 12-13 ἀνεστραμμενον. μεσων adhuc vidit Perne  
 13-16 om S 14 στιγμή] σίγμα Alyp 19 ὀρθόν S, om P et Alyp  
 19-20 post 23 praebebet S 21 om S 22 διεξευγεμενων adhuc vidit Perne  
 τρίτην διεξευγμένον S ξ̄ ] ξ̄ ὀρθόν S 24-25 om S ὀρθόν om P et A-

lyp, suppleui ex 19 (sed fortasse hic et illic delendum) διεξευγμε-  
νων (24) et και (25) adhuc vidit Perne 28 Ε ] ει Alyp 28-29 om S  
31 ζ ] ζ έλλιπές S 33 άμελητή S Post 33 Alypi genus diatonum 3 prae-  
bet S (cum notis musicis); deinde sequuntur Ptolemaei Harm III,5 et 6

## NOTES:

- \* 1. The heading in S reads σημειωσαι for σημεια. Evidently, the word was abbreviated in the model manuscript. The same error is repeated in the heading to the following paragraph of S (Alypius, Diaton. 3).
- \* 2. The Hypolydian diatonic scale is provided with its notational signs in S.
- \* 3. For an interpretation of υπάτων (S, lines 3 and 5), see Jan's introduction to the Musici Scriptores Graeci, p. XXV.

## XXVIII

- |  |   |
|--|---|
| <p>100. 'Ιστέον οὖν ὡς μὲν λόγος ἀρ-Ρ: 'Ιστέον οὖν ὡς μὲν λόγος ἀρ-<br/>χαῖτος τῶν θύραθεν· 'Ο παρ' Ἑλλησι<br/>θρυλλούμενος Πυθαγόρας παρὰ τινι<br/>χαλκείῳ πολιτικῷ καθεζόμενος καὶ<br/>5 διαφόρων ἤχων ἐξ αὐτοῦ ἀκούων -<br/>καὶ ταῦτα μιᾶς ὕλης οὐσης τῆς<br/>χαλκευομένης, καὶ τοῦ αὐτοῦ καὶ<br/>ένδς σκεύους τοῦ χαλκεύοντος,<br/>καὶ τοῦ αὐτοῦ ἄκμωνος ἐν ᾧ περ<br/>10 ἡλαύνοντο τὰ χαλκευόμενα - σκοπὸν<br/>ἔθετο τὴν τῶν ἀποτελουμένων ἤχων<br/>διαφορὰν ὅθεν γίνεται καταλαβεῖν.<br/>καὶ δὴ πολλὰ σκοπήσας καὶ ἐρευ-<br/>νήσας, τέλος πρὸς τὰς σφαίρας ἐν-<br/>15 ἐσκηφεν· ἅς καὶ σταθμώσας καὶ εὐ-<br/>ρὼν τὴν μὲν βαρυτέραν τὴν δὲ κου-<br/>φοτέραν, ἔγνω ἐντεῦθεν προΐεσθαι<br/>τὸ τῶν ἤχων διάφορον, καὶ ἀναλό-<br/>γως τὴν τε κουφότητα τῶν φωνῶν<br/>20 τῇ τῶν σφαιρῶν ἔχειν βαρύτητι<br/>καὶ τὰ ἀπηχήματα.....</p> | <p>χαῖτος τῶν θύραθεν· ὁ παρ' Ἑλλησι<br/>θρηλλούμενος πυθαγόρας παρὰ τινι<br/>χαλκείῳ πολιτικῷ καθεζόμενος· καὶ<br/>διαφόρων ἤχων ἐξ αὐτοῦ ἀκούων·<br/>καὶ ταῦτα μιᾶς ὕλης οὐσης, τῆς<br/>χαλκευομένης, καὶ τοῦ αὐτοῦ καὶ<br/>ένδς σκεύους τοῦ χαλκεύοντος·<br/>καὶ τοῦ αὐτοῦ ἄκμωνος ἐν ᾧ περ<br/>ἡλαύνοντο τὰ χαλκευόμενα· σκοπὸν<br/>ἔθετο τὴν τῶν [ἀπ]οτελουμένων ἤχων<br/>διαφορὰν ὅθεν γίνεται καταλαβεῖν·<br/>καὶ δὴ πολλὰ σκοπήσας καὶ ἐρευ-<br/>νήσας· τέλος πρὸς τὰς σφαίρας ἐν-<br/>ἐσκηφεν· ἅς καὶ σταθμώσας, καὶ εὐ-<br/>ρὼν τὴν μὲν, βαρυτέραν· τὴν δὲ, κου-<br/>φοτέραν, ἔγνω ἐντεῦθεν προΐεσθαι<br/>τὸ τῶν ἤχων διάφορον· καὶ ἀναλό-<br/>γως τὴν τε [κου]φότητα τῶν φωνῶν<br/>ἦγουν τῶν σφ[αιρῶν ἔχειν] βαρύτητι<br/>καὶ τὰ ἀπηχήματα [ ]</p> |
|--|---|

2 post θύραθεν non distinxit, sed post 3 θρυλλούμενος comma posuit Vincent

3 θρηλλούμενος P 4 κείω πολιτι in rasura P 10 ἡλαύνοντα P

11 et 19 lacunas suppleuit Vincent 20 τῇ coniecit Ebbesen, ἦγουν P

20 σφαιρῶν adhuc vidisse Vincent crederes, quippe qui σφαιρῶν [ἀντιπαθεῖν] e-

didit; Perne vero solummodo οφ (id est σφ) vidit; de illo ergo dubitandum  
 20 ἔχειν suppleuit Ebbesen, ἀντιπαθεῖν Vincent 21 τὰ ἀπηχήματα [διάφο-  
 ρα γεγενῆσθαι] ἐξ αὐτοῦ Vincent

---

TRANSLATION:

100. NB. An old story of pagan origin runs as follows: Pythagoras, well-known from Greek lore, was sitting near an urban smithy and heard different sounds coming from it - albeit one single material was being worked on (*the copper*), and one and the same utensil performed the work (*the hammer*), and the objects were being forged on the same anvil. Therefore he decided to find out what made the sounds different; and his research at last led him to investigate the bowls (*the vessels on which the copper-smith was working*). He weighed them, and finding that one was heavier than the other he realized that this was the reason why their sounds were different: there was, in fact, a correspondence between the lightness of the sounds and the heaviness of the bowls, and between the resonances.....

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NOTES:

- \* 1. §§100-105 constitute Vincent's Fragment V (Notice... pp.266-73).
- \* 2. For §§100-101, see my article in CIMAGL 31A, Copenhagen 1979, pp.1-9 ("A Neglected Version of the Anecdote about Pythagoras's Hammer Experiments").
- \* 3. Lines 1-3 are evidently the product of a Christian mind (οὐ θύραθεν and "Ἕλληνες!").
- \* 4. In my article on "The Manuscript Tradition of the Hagiopolites" (Texte und Untersuchungen Bd. 125, Überlieferungsgeschichtliche Untersuchungen, hrsg. v. Franz Paschke, Berlin 1981, pp.465-78) I quoted (on p.473) a short version of this anecdote - from S, fol.99v (in the treatise Πόσου ἤχου). I have since then found an even more interesting version, again in S (fol. 34v, in the treatise Τί ἐστι προσωδία). It reads as follows: Εἰ θέλεις μαθεῖν καὶ τὴν ἀρχαιογυνεῦαν, πῶς γεγονάσιν ἤχοι παρὰ τῆς ἀρχῆς. καθὼς ἠκούσθη μὲν παρὰ τῶν προτέρων ἡμῶν διδασκάλων, καὶ εἰς παλαιὰ βιβλία εὑρον οὕτως. ὅτι λέγουσι τινές, ὅτι ὁ σοφὸς παρ' ἑλλήσι πυθαγόρας μὲν τῶν ἡμερῶν παρὰ τινος χαλκοῦ χαλκεύων, καὶ οὗτος ὁ πυθαγόρας καθεζόμενος, καὶ τοὺς ἤχους τῶν χαλκευομένων ἐξακροώμενος, λαβὼν τὸ ἥθος, καὶ τὸν κτύπον τῆς φωνῆς κατὰ διάνοιαν, κατεσκεύασεν αὐτὸς ὄργανον διὰ τεσσάρων χορδῶν, καλέσας τοῦτο μουσικὴν. καὶ ἐκ τούτου κατ' ὀλίγον ἀνεβίβασεν αὐτὸν εἰς καβάλλια ιε' καὶ ἐξέθετο τοὺς ἤχους ἐξ αὐτῶν, ὥστε καθ' ἓν καβάλλον εἰς ἤχον. Ἕτεροι δὲ λέγουσι κατασκευασθεῖσαν τὴν μουσικὴν παρὰ τοῦ ὀρφέως etc.
- \* 5. The lacuna after line 21 is due to a physical damage at the bottom of fol. 19. Vincent's attempt to restore the text presupposes that it continues on fol. 20r; but here the first word (the letter ξ) implies that a red initial letter (Ε) has been left out in the rubrication. Consequently, ἐξ αὐτοῦ is the beginning of §101. I have found no evident way to repair the end of §100.

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XXIX 101. Ἐξ αὐτοῦ καὶ αὐτὸς παρορ- P: <E>ξ αὐτοῦ καὶ αὐτὸς παρορ-  
 μηθεῖς κατεσκεύασεν ἀπὸ χορδῶν 20r μηθεῖς κατεσκεύασεν ἀπὸ χορδῶν  
 τεσσάρων καὶ μόνον ὄργανον ὃ κέ- τεσσάρων καὶ μόνον ὄργανον, ὃ κέ-

κληκε μουσικὴν. εἴτα ἀνεβίβασεν  
 5 αὐτὸ εἰς ἑπτὰ χορδάς, καθὼς ὁ  
 Πυθαγορικὸς Φιλόλαος ἐν τινι πο-  
 νήματι αὐτοῦ πρὸς τινα γυναῖκα  
 Πυθαγορείαν ἐκτιθέμενος γράφει,  
 10 οὕτω φάσκων· † ἁρμονίας μεγέθους  
 συλλαβῆς δι' ὅξεϊα μείζων τὰς συλ-  
 λαβάς ἐπείγη†.

κληκε μουσικὴν· εἴτα ἀνεβίβασεν  
 αὐτὸ εἰς ἑπτὰ χορδάς· καθὼς ὁ  
 πυθαγορικὸς φιλόλαος, ἐν τινι πο-  
 νήματι αὐτοῦ· πρὸς τινα γυναῖκα  
 πυθαγορείαν ἐκτιθέμενος γράφει·  
 περὶ τῆς ἁρμονικῆς φιλοσοφίας,  
 οὕτω φάσκων· ἁρμονίας μεγέθους  
 συλλαβῆς δι' ὅξεϊα μείζων τὰς συλ-  
 λαβάς ἐπείγη·

10-12 corrupta Philolai verba apud Nicomachum (Enchiridion p 252,17-19 Jan)  
 sic traduntur: ἁρμονίας δὲ μέγεθος συλλαβὰ καὶ δι' ὅξεϊα. τὸ δὲ δι' ὅξεϊα  
 μεῖζον τὰς συλλαβάς ἐπογδόω

#### TRANSLATION:

101. Stimulated by this observation he then made an instrument by means of no more than four chords and gave it the name 'Mousike'. Later-on he raised the number of chords to seven, as Philolaos the Pythagorean expounds in a work of his addressed to a Pythagorean woman. Philolaos writes the following about the theory of harmonics: "The size of the Harmonía (the octave) equals Syllabā (fourth) plus Dioxeiān (fifth); the Dioxeiān is an Epōgdoon (a whole tone) greater than the Syllabā".

#### NOTES:

- \* 1. I have left the Philolaos quotation in its corrupt state, not knowing what the text looked like when it reached the tradition of P.
- \* 2. It is interesting to see how the word ἀνεβίβασεν (line 4) was transplanted from this Ancient passage into the Byzantine tradition (Hagiopolites §6,20 and the text quoted in §100 note 4).

102. Πρὸς δὲ σαφήνειαν σχηματισ- P: πρὸς δὲ σαφήνιαν σχηματισ-  
 τέον οὕτως· ὑπάτη, παρυπάτη, ὑ- τέον οὕτως ὑπάτη· παρυπάτη· ὑ-  
 περμέση, μέση, παραμέση, παρανή- περμέση· μέση· παραμέση· παρανή-  
 τη, νεάτη. τη· νεάτη:-

ὑπάτη	παρυπάτη	ὑπερμέση	μέση	παραμέση	παρανήτη	νεάτη
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#### TRANSLATION:

102. The following figure should make this more clear: Hypate, Parhypate, Hypermese, Mese, Paramese, Paranete, Neate.

- XXX 103. Ἰδοὺ τοίνυν ἐπτάχορδον ὄρ- P: Ἰδοὺ τοίνυν ἐπτάχορδον ὄρ-  
 γανον. ἡ τοίνυν τρίτη χορδὴ καὶ γανον· ἡ τοίνυν τρίτη χορδὴ καὶ  
 ὑπερμέση λεγομένη πρὸς τὴν πρῶ- ὑπερμέση λεγομένη πρὸς τὴν πρῶ-  
 την καὶ ὑπάτην ὀνομαζομένην τὸν [τ]ην καὶ ὑπάτην ὀνομαζομένην, τὸν  
 5 ἐπίτριτον λόγον ἔχει, ὃν καὶ συλ- ἐπίτριτον [λό]γον ἔχει, ὃν καὶ συλ-  
 λαβὴν ἀποκαλοῦσιν· ἐπὶ..... λαβὴν ἀποκαλοῦσιν· ἐπὶ [c 10 litt  
 .....ητέον· οὐδὲ γὰρ ἄλλως ἔχει ], ητέον· οὐδὲ γὰρ ἄλλως ἔχει  
 εἰ μὴ ἐκ τῶν ἀριθμῶν· οἷον ὁ τέ-20ν εἰ μὴ ἐκ τῶν ἀριθμῶν· οἷον ὁ τέ-  
 τартος πρὸς τὸν τρίτον ἐπίτριτος· τартος πρὸς τὸν τρίτον, ἐπίτριτος·  
 10 ἐπίτριτος λέγεται οὗτος, καθότι ἐπίτριτος λέγεται οὗτος, καθότι  
 ἐπιφέρεται τῇ μὲν καὶ τὸ τρία ὄλον ἐπιφέρεται μὲν καὶ τῶν τρία ὄλων·  
 καὶ τὸ τρίτον αὐτῶν τὸ ἔν· ἀρ- καὶ τὸ τρίτον αὐτῶν τὸ ἔν· ἀρ-  
 κεῦ γὰρ οὗτος εἰς τὸ τοῦ ἐπιτρί- κεῦ γὰρ οὗτος εἰς τὸ πους ἐπιτρί-  
 του παράδειγμα. ἐξ αὐτοῦ δὲ τοῦ του παράδειγμα· ἐξ αὐτοῦ δὲ τοῦ  
 15 ἀριθμοῦ ἐπιγινώσκειται καὶ ὁ ἐπί- ἀριθμοῦ, ἐπιγινώσκειται καὶ ὁ ἐπί-  
 τριτος φθόγγος, ὃν αἱ χορδαὶ τῆς τριτος φθόγγος· ὧν αἱ χορδαὶ τῆς  
 μουσικῆς καὶ τῶν λοιπῶν ὀργάνων μουσικῆς· καὶ τῶν λοιπῶν ὀργάνων·  
 ἀποτελοῦσι τῇ τοῦ ἐβδόμου χορ- ἀποτελοῦσι τῇ τοῦ ἐβδόμου χορ-  
 δῆς ὀργάνου· ὥστε δῆλον γε- δῆς ὀργάνου· ὥστε δῆλον γε-  
 20 νέσθαι, οἷα φθόγγων ἀναλογία νέσθαι, οἷα φθόγγων ἀναλογία,  
 ἐστὶν ἐν αὐταῖς. ἐστὶν ἐν αὐταῖς·

5 [ἔχει λόγον] suppleuit Vincent, sed aliter legendum esse docent vestigia  
 litterarum 5-6 ἐπὶ [τρία γὰρ καὶ ἔν συλληπ]τέον suppleuit Vincent, sed  
 vide annotationem 11 τὸ τρία ὄλον coniecit Vincent, τῶν τρία ὄλων P  
 12-13 ἀρκεῦ P, ἀρχεῦ coniecit Vincent; vide annot 13 τὸ τοῦ scripsi,  
 τὸ πους P, τόπους Vincent 16 ὃν Vincent, ὧν P 18 τῆς coniecit Vin-  
 cent qui pro 16 ὃν - 19 ὀργάνου haec maluit: ὃν αἱ μέσαι χορδαὶ τῆς μουσι-  
 κῆς καὶ τῶν λοιπῶν ὀργάνων ἀποτελοῦσι τῆς ἐβδόμης τοῦ ὀργάνου χορδῆς; lo-  
 cus vero aliter fortasse restituendus, vide annotationem

#### TRANSLATION:

103. This is thus the instrument with seven chords. The third chord, the so-called Hypermese, has an Epitrite ratio to the first, the one also called Hypate. To denote the Epitritos they use the terms Syllabé; (but one should rather say Epitritos?), since the ratio (between the chord) can only be expressed "from the numbers" (i.e. mathematically). Take for instance Epitritos = 4:3. This (ratio) is called ἐπίτριτος, because one third of the three is added (ἐπιφέρεται) to the total of three. This example of Epitritos will suffice (?). From the number itself also the sound of Epitritos has been realized, the sound produced by means of the chords of the Mousike and the other (stringed) instruments. In this way it becomes clear how the proportions of sounds are in the chords.

## NOTES:

- \* 1. Vincent's solution in lines 4-5 is not convincing. It is far too long, and goes against the clear accent of P in 4. Besides, the letter of which the right part can be discerned before  $\eta\tau\acute{\epsilon}\omicron\nu$ , can hardly be a  $\pi$ ; maybe rather a  $\rho$ . In the actual context it would be tempting to look for an  $\acute{\epsilon}\pi\iota\tau\rho\iota\tau\omicron\varsigma$ . Perhaps  $\acute{\epsilon}\pi\iota[\tau\rho\iota\tau\omicron\nu\ \mu\acute{\alpha}\lambda\lambda\omicron\nu]\ \rho\eta\tau\acute{\epsilon}\omicron\nu$  or something similar?
- \* 2. In 11, Ebbesen, suggests to read  $\mu\epsilon\tau\acute{\alpha}$  for  $\mu\acute{\epsilon}\nu$  καὶ. This seems to make sense, with τὸ τρίτον αὐτῶν as nominative. But in such dubious surroundings it is better to suspend any decision. Cf. also §104,6-7.
- \* 3. I do not understand ἀρκεῖ - παράδειγμα (12-14), but I am sure that Vincent is wrong: "aussi figure-t-il (i.e. l'épitríte), dans les traités d'arithmétique, en tête de *Tableau des rapports épitrítes*" (!)
- \* 4. The corrupt passage in 18-19 may be an ill-placed and distorted gloss on τῆς μουσικῆς (16-17): ἦτοι τοῦ ἐπιταχόρου ὀργάνου. Ebbesen, to whom I owe this elegant solution, points out that a ζ in the model of P would make the mistake ἐβδοόμου understandable.

104. Ἡ μέντοι μέση χορδὴ πρὸς τὴν τρίτην χορδὴν τοῦ ὀργάνου τὸν ἐπόγδοον κέκτηται λόγον· καὶ γὰρ ὁ ἐννέα ἀριθμὸς πρὸς 5 τὸν ὀκτώ τὸν αὐτὸν ἔχει λόγον· ἐπὶ γὰρ τὸν ὀκτὼ ἔχει καὶ τὸ ὄγδοον αὐτοῦ ἦτοι τὸ ἔν. ἐξ ὁκ- τῶ γὰρ καὶ ἐνὸς συνίσταται ὁ ἐννέα ἀριθμὸς.	P: ἡ μέντοι μέση χορδῇ, πρὸς τὴν τρίτην χορδὴν τοῦ ὀργάνου τὸν ἐπόγδοον, κέκτηται λόγον· καὶ γὰρ ὁ ἐννέα ἀριθμὸς πρὸς τὸν ὀκτώτονον αὐτὸν ἔχει λόγον· ἐπεὶ γὰρ τῶν ὀκτὼ ἔχει καὶ τὸν ὄγδοον αὐτοῦ, ἦτοι τὸ ἔν· ἐξ ὁκ- τῶ γὰρ καὶ ἐνὸς συνίσταται ὁ ἐνέα ἀριθμὸς·
5 ὀκτώτονον P, correxit Vincent τὸν ὀκτὼ coniecit Vincent, τῷ ὀκτὼ maluit Ebbesen, fortasse recte 6-7 τὸ ὄγδοον Vincent, τὸν ὄγδοον P	6 ἐπὶ scripsi, ἐπεὶ P τῶν ὀκτῶ P,

## TRANSLATION:

104. The middle chord has a 9:8 ratio (ἐπόγδοον λόγον) to the third chord of the instrument (the *Hypermesē*). For 'nine' has this relation to 'eight', being one eighth of eight, i.e. one, more than eight - since 'nine' consists of 'eight' plus 'one'.

105. Ἡ μέση χορδὴ πρὸς τὴν πρῶ- την καὶ ὑπάτην λεγομένην τὸν ἡ- μιόλιον ἐπιφέρεται λόγον, ὃν καὶ δι' ὀξείαν ὠνόμασε κατὰ τοὺς λό- 5 γους τῆς ἀρμονίας. ἡμίολος δὲ ἀριθμὸς ἐστὶν ὁ ἐννέα πρὸς τὸν	P: ἡ μέση χορδῇ πρὸς τὴν πρῶ- την, καὶ ὑπάτην λεγομένην, τὸν ἡ- μιόλιον ἐπιφέρεται λόγον· ὃν καὶ δι' ὀξείαν ὠνόμασε κατὰ τοὺς λό- γους τῆς ἀρμονίας ἡ[μ]ίολος δὲ ἀριθμὸς ἐστὶν· ὁ ἐννέα πρὸς [τὸν]
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ΞΞ..... σὺν τῷ ὅλῳ ἦτοι τῷ ἔκτῳ      ΞΞ [4-5] σὺν τῷ ὅλῳ ἦτοι τῷ ἔκτῳ  
 ΞΧ.....      ΞΧ[      18      ]

Reliqua desiderantur

4 διόξειαν P, idest διοξειᾶν      5 ἡμιόλιος retinendum an potius ἡμιόλιος legendum? τὸν suppleui, τὸ vidit (?) Vincent      7 sq lacunosus desinit P; alii alia suppleuerunt, utpote [καθότι] σὺν τῷ ὅλῳ ἦτοι τῷ ἔκτῳ ἐλ[λεῖπον τὸ ἡμισυ αὐτοῦ ἦτοι τὸ τρία παραθετέον.] Vincent, [διότι] σὺν τῷ ὅλῳ ἦτοι τῷ ἔκτῳ (nisi in ΞΞ corrigendum) ΞΧ[εἰ καὶ τὸ ἡμισυ αὐτοῦ, ἦτοι τὸν (vel τὰ) τρία.....] Ebbesen. Cui pro innumerabilibus fere beneficiis auxilioque in locis corruptis emendandis hic quoque gratias agere statui, vide app et annot §§1-105

#### TRANSLATION:

105. To the first chord, the so-called Hypate, the middle chord has a 3:2 ratio (ἡμιόλιον λόγον), which he (Pythagoras?) called Dioxeián "in accordance with the proportions of harmonics". Hemiolios as a number is  $\frac{9}{6}$  [ , since it (nine) contains half of the 'six', i.e. 'three', together with its total of six .....]

#### NOTES:

- \* 1. the *variatio sermonis* displayed in §§103-05 seems strangely akin to what we have met in the Byzantine paragraphs, e.g. §§ 6 and 35.
- \* 2. In 1973 I copied what was to be seen of the letters and accents at the lacuna in line 7. Here is a photocopy of my note:

These traces fit badly to Ebbesen's διότι; they go better with Vincent's καθότι - a reading which is supported by the parallel in §103,10.

INDEX OF PROPER NAMES (COMPLETE)  
AND OF TERMS (SELECTIVE)

NB. An *asterisk* indicates that the word is found in the paragraphs which contain Ancient musical theory (§§ 11 and 56-105)

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